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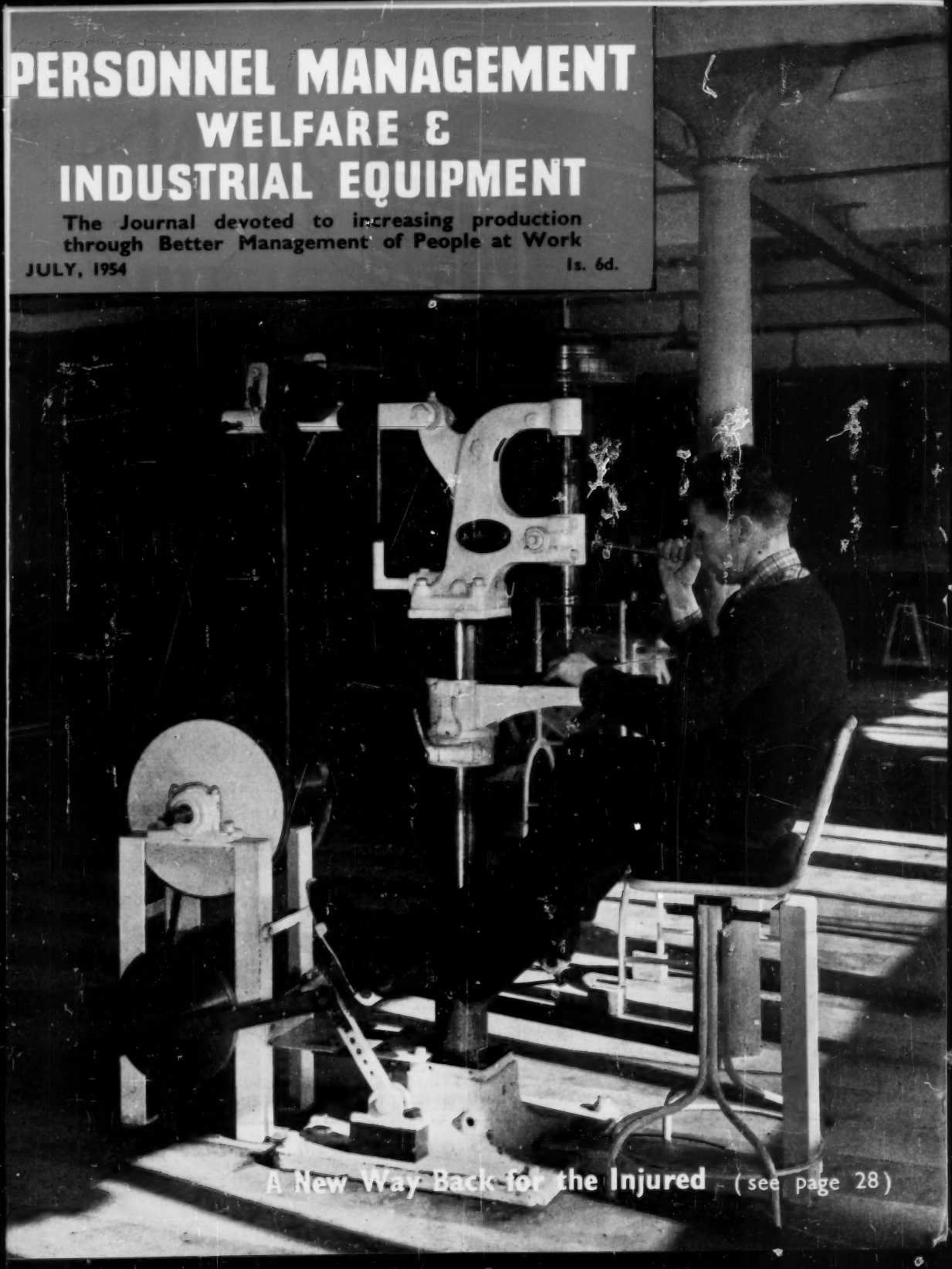
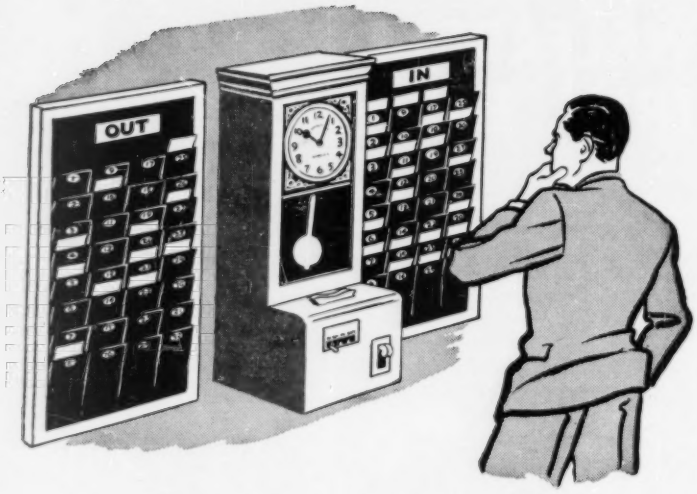


A New Way Back for the Injured (see page 28)



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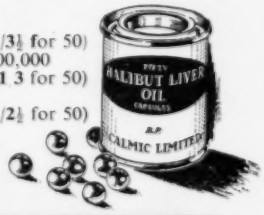

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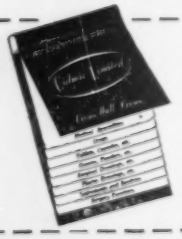

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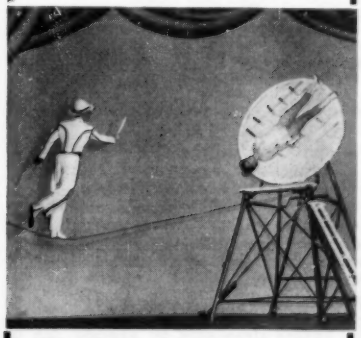

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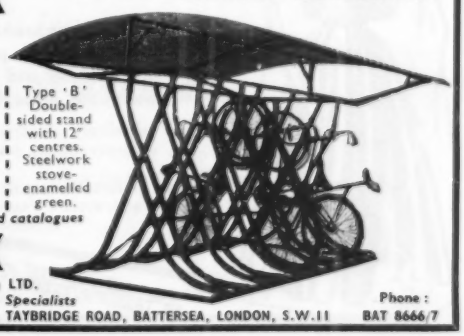

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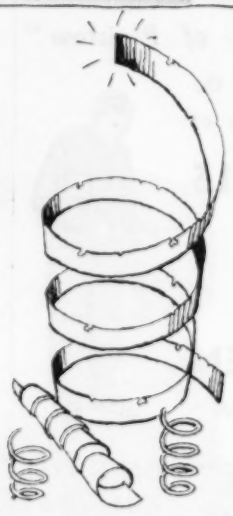

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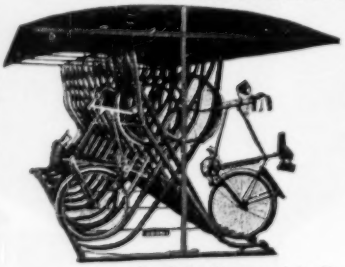

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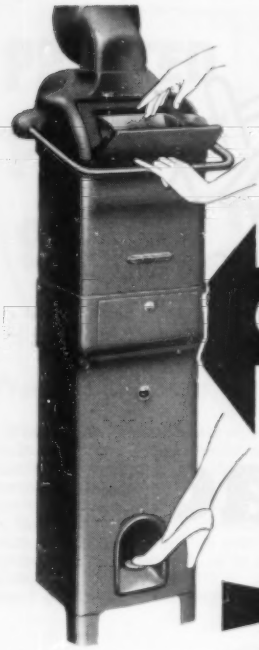

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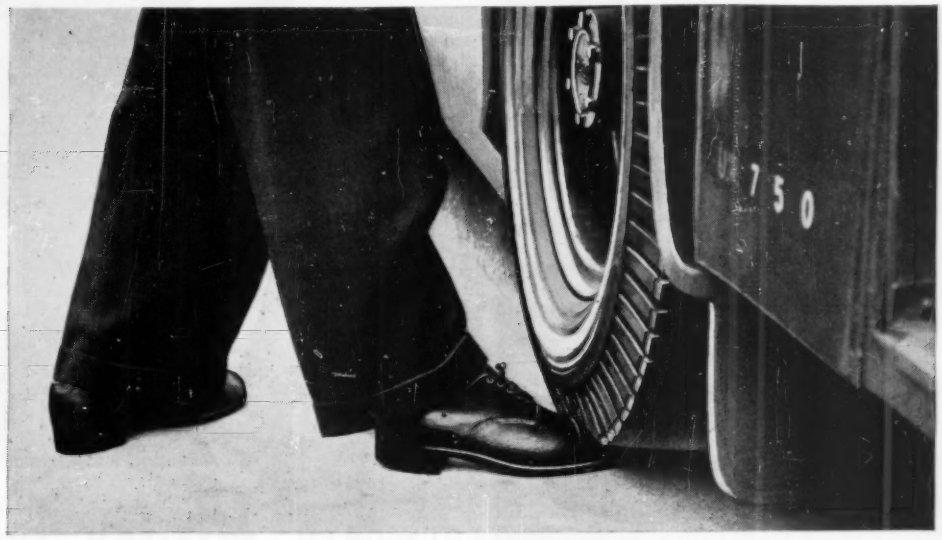

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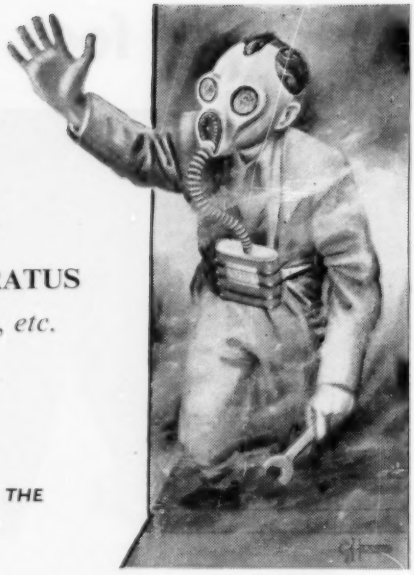

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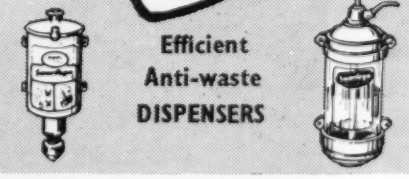

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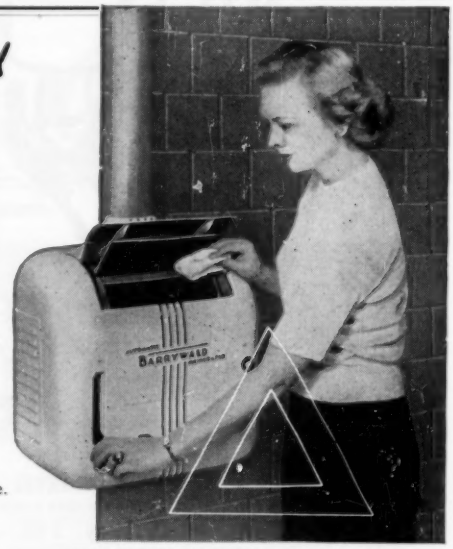

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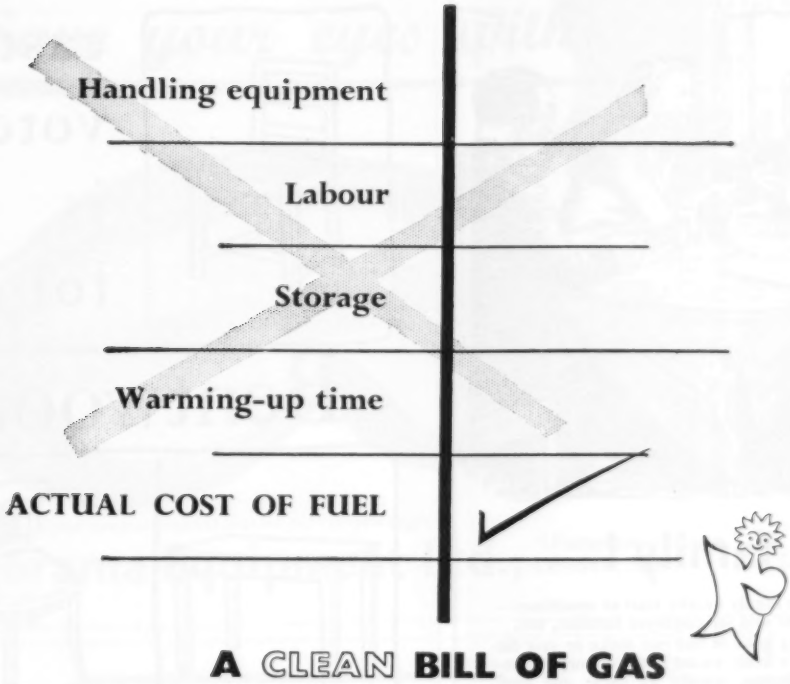

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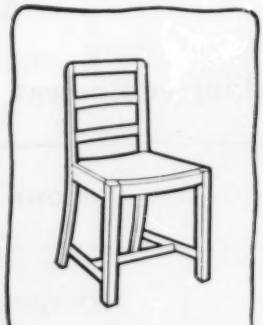

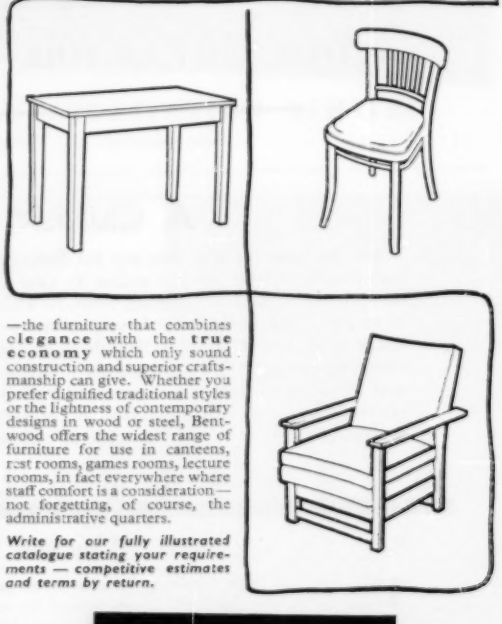

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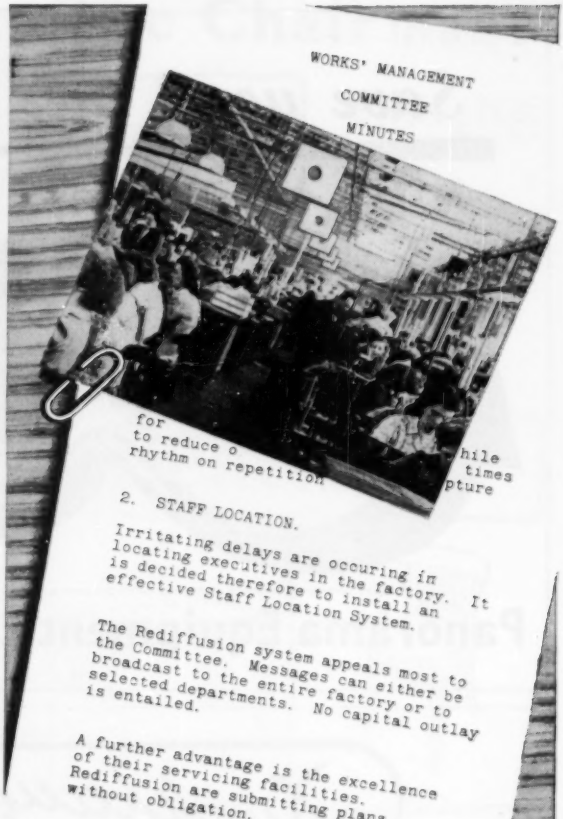
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The recent Mechanical Handling Exhibition brought home the full impact of the post-war revolution in the moving of goods and materials. Throughout industry, mechanical aids of all types are cutting costs and increasing productivity. Here, however, we deal mainly with another aspect of modern handling methods, namely—how these eliminate fatigue and reduce accidents and, by making work control easier, help the worker to earn more.

How Mechanical Handling Helps Your Workers Too

By J. H. EVEREST

THE last year for which complete figures on industrial accidents are available is 1951. In the course of that year no less than 183,000 accidents were notified, of which over 50,000 are officially attributed to the manual handling of goods. These figures relate to notifiable accidents only (involving the loss of capacity to earn full wages for three days) and take no account of bruised knuckles, torn skin and similar minor mishaps caused by handling which must run into millions. Yet every small cut is a potential source of danger and a very real cause of dissatisfaction.

In many progressive works the accidents rate has been cut appreciably during the past few years, sometimes by as much as 30 per cent. While this reduction is due to many measures, it is agreed that the most important is the introduction of mechanical equipment, such as fork trucks, for the movement of goods.

The human body, while well adapted to the employment of tools, is singularly ill suited for the handling of heavy loads. The skin is easily torn, the abdominal wall subject to ruptures and hernias and the shoulders too high. Above all, man is subject to fatigue and fatigue impairs his judgment. It is perhaps not sufficiently appreciated that a worker who gets hurt as a result of an apparently careless action is the victim of fatigue. His accident is often the result of exhaustion resulting in impaired alertness, rather than of innate carelessness. A worker cannot be expected to work at a rate exceeding about one-tenth of a horsepower, yet one often finds otherwise intelligent business men willing to pay several shillings per hour for manual labour, while refusing to spend a matter of pennies on the operation of an electric truck.

The fork truck and pallet truck, perhaps more than any other equipment, relieve the worker of the need for lifting and shifting the goods he produces. It has been shown repeatedly that to pay for itself, an electric fork truck, such as the one illustrated overleaf, need only be used for about half an hour per day.

The reason is easy to see when one considers that even a strong man can hardly be expected to lift loads exceeding 1 cwt., while the fork truck can raise loads of up to 1 ton, or 20 times greater. Moreover, a man cannot raise a load higher than about 5 feet, while a fork truck can stack more than twice as high. In fact, a fork truck can easily treble the capacity of a store, which in itself leads to important savings.

Similarly, one man with a hand truck may be able to push 3 cwt. at an average speed of about 1 m.p.h., whereas a power truck can transport several tons at much higher speeds. Many trucks are even provided with rider platforms to save the operator the need for walking. In large firms, where a truck may cover several miles per day, this is a valuable advantage.

Most important of all, mechanical equipment can work round the clock without showing any fatigue. All these factors give the electric fork truck an advantage of something like 50 : 1 over the manual worker in terms of ton-miles handled.

The ease of operation of electric power trucks and the elimination of all physical effort resulting from their

5 Mechanical Handling Advantages

1. *Accidents are reduced and body fatigue eliminated. Mechanical trucks can give round-the-clock service without strain.*

2. *The ratio of ton-miles handled is about 50 : 1 over manual methods.*

3. *A fork-lift truck can often treble the existing storage space.*

4. *Handling and packaging costs are cut and losses through damage in transit reduced.*

5. *Cleaner, swifter handling means greater productivity — hence better wages for the labour force.*

use has an important implication from the point of view of the welfare officer: materials handling has become an occupation to which disabled persons are well suited. Provided an operator has full sight and hearing and the use of at least one hand, he can do the work of a whole posse of able-bodied men if he is equipped with a fork truck.

Women also make good truck drivers. The controls are extremely simple and require no technical knowledge. On the other hand, skill is essential and, in this respect, many girl operators can put their male colleagues to shame. It is no longer an uncommon sight to find a girl operating a crane capable of handling many tons (see page 27).

In its report on materials handling, the British Productivity Council states that handling accounts for between 15 and 85 per cent of the cost of a product. Since handling charges are normally included among the general overheads, their effect on the cost of the end product is often overlooked.

It is generally accepted that the only way in which substantial improvements in productivity can be made in this country without heavy capital expenditure on new factories and equipment, is to replace the old manual handling methods by the introduction of appropriate mechanical handling equipment.

The rapid spread of modern materials handling methods throughout industry has a number of secondary advantages. One of these is the sharp reduction in loss of goods, through damage in transit, another the equally significant reduction in pilfering. As more and more goods tend to be packed in "unit loads" which can be mechanically handled from production line to consumer, so the chances of their being damaged or "getting lost" are reduced. The cost of packaging can also be slashed and can itself often be mechanised where individual items would have to be expensively packed by hand.

The unit load system and the use of pallets, skids or stillages, which are a necessary corollary of mechanical handling, almost always lead to more orderly storage, so that goods are more easily accessible and storekeeping can be streamlined.

All these points bear out one of the basic concepts of mechanical handling, namely that every time a product is handled something is added to its cost, nothing to its value. How important this fact is can be seen from a typical example. A metal merchant may supply 50 ingots to a manufacturer. These used to be loaded, ingot by ingot, on to a lorry and unloaded, again ingot by ingot, at the factory. The 50 ingots had then to be taken to the store and eventually stacked there until required for manufacture. Handling 50 ingots four times results in 200 operations. By contrast, the same transport requires only *four* operations if the 50 ingots are strapped together into a unit load which can be handled by a fork truck. The strapping need not be broken until individual ingots are required for manufacture.

A question which a welfare officer may well ask is: Will not the introduction of powered trucks, while eliminating the accidents due to manual handling, introduce a new hazard in the form of "traffic accidents"? This anxiety is really an echo of the road safety campaigns, but the comparison is not a valid one. First of all, these trucks are very much slower. Some trucks, for example, travel at a maximum speed of 4½ m.p.h., *which by extensive experiments has been found to be the highest speed compatible with safety under all conditions.* Secondly, a wide range of safety mechanisms is incorporated which could not be applied to road vehicles. Controls are invariably spring-loaded into the neutral position (the so-called "dead man" system), so that if anything should happen to the driver to cause him to lose control of the truck, it would automatically stop. Brakes are automatically applied at the same time.

Ingots being unloaded. Two hundred operations are reduced to four, when fifty ingots are strapped together at a time and handled by a fork truck.

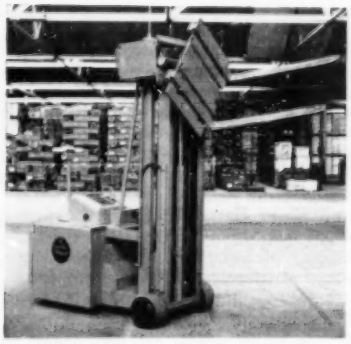
Unlike human labour, trucks cannot be overloaded, because they have built-in overload devices which prevent them from being operated under conditions exceeding their capacity. Even the battery is protected by a special cut-out from damage through use when it is too "flat" for the job. It must then be recharged by simply plugging into the mains, through a built-in charger, or (if the truck is to be used 24 hours a day) a spare battery must be used. Changing batteries is a matter of minutes. In fact, it can be said that many trucks are complete with built-in safety.

The economies which can be achieved with mechanical handling aids are so great that it is not out of place to sound a note of warning. No management should be content to buy such equipment, put it into operation and leave it at that, simply because spectacular savings are being achieved. Production efficiency means the maximum utilisation of every productive unit, be it a worker, a machine or a truck. Full efficiency can only be obtained by integrating new mechanical aids with existing plant and, if necessary, modifying the latter. A new conveyor may save a lot of handling time in any case, but it may not be possible to use it to its full advantage unless the layout of a workshop is rearranged to bring it into line with the new handling technique. A crane may require certain structural modifications to buildings. Tractors may need ramps where steps would curtail their sphere of activity; products can often be profitably modified to make it easier to handle them mechanically. These measures may, of course, entail considerable expenditure, but the resulting improvements in handling efficiency—and therefore in savings—will be greater still. It is safe to say that money spent on better handling is the most profitable investment industry can offer today.

The Revolution in Mechanical Handling

This **Stacatruc** battery-electric fork lift truck by **I.T.D. Limited** has a maximum load capacity of 4,430 lbs. It has been specially designed for work of a tough nature in heavy industries, docks, harbours and the like.

This **Coles** "Electric Eel" tractor has a maximum drawbar pull of 1,200 lbs. The steel chassis frame is electrically welded, its turning radius is only 70 inches, and two braking systems are fitted.

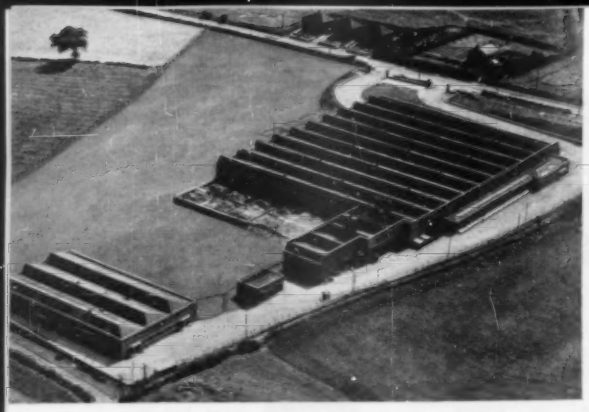


A rotating head attachment for this **Lansing Bagnall** truck neither reduces its capacity nor increases the distance between load centre and mast. It can carry loads of 1 ton at 9 m.p.h. and start on gradients of 1 : 8 when fully loaded.

The new **Jones KL 75** constructional crane can take a maximum load of 7½ tons, and is designed to give great outreach and height as well as mobility. A multi-sectional lattice jib gives working lengths of 25, 45 and 65 feet. Here a "Jury Mast" jib extension has also been added.

A **Shelvoke & Drewry** "Freightlifter" with jib crane attachment handling a pipe mould 18 feet long and 7 feet in diameter, weighing five tons.

The ¾ cubic yard **Weatherill** hydraulic overloader, mounted on pneumatic tyres, is capable of handling 100 tons or more per hour. The makers claim it is the first of its type to be made in Britain.



Aerial view of **Brook Motors'** new factory showing the separate canteen block on the left.

Where Electronics Help Output and The Wage Packet

"A good welfare policy plus electronic control !" sounds a fitting slogan for any industry today. And here is the story of a firm which has applied both and obtained, as a result, higher output and one of the happiest labour forces in the country.

AT ten minutes to one on the afternoon of May 28, some 450 girls employed in *Brook Motors Ltd.'s* new factory at Barugh Green, near Barnsley, sang to the tune of "The Happy Wanderer" a song of welcome to 400 guests who had come for the official opening of the plant. The remarkable thing about this gesture was its spontaneity, the girls themselves having previously asked if they might sing for the visitors. That more than anything pointed to the good relations which exist between the firm and its employees ; there could have been no better tribute to 50 years of enlightened management.

However, as is obvious from even the most cursory tour of the new premises, the girls have something more than mere goodwill to sing about. The Barugh Green factory is one of those plants which give the visitor some idea of what industry will look like many years hence. It is spacious, bright, well-ventilated, colour has been intelligently applied, noise reduced to a minimum, handling and lifting is done by mechanical means wherever possible, machines are right up-to-date and every device has been used to lighten physical labour. And dominating all activity on the shop floor is an ingenious system of electronic control which ensures that every girl has a steady supply of work and so earns her maximum piece-work bonus.

As with so many flourishing enterprises of today, *Brook Motors Ltd.* has grown from very humble beginnings. The business was launched in 1904 with an initial capital of £300, its premises then consisting of a small room in a Huddersfield side street. Today, the company employs over 2,000 people and is now the largest exclusive maker of a.c. motors in the world with a turnover in 1953 of £4,500,000. There are ten factories at Huddersfield which, together with the new plant at Barugh Green, cover an area approaching 1,000,000 sq. feet. There are 16 branch offices throughout the United Kingdom and representatives in all parts of the globe.

In 1951 *Brook Motors* became a public company but it has remained in essence a family business which genuinely looks upon its employees as part of the family. Mr. Ernest Brook, the founder, was in fact one of the first employers to introduce a profit-sharing scheme and a great number of employees still hold shares obtained under this. To mark its Golden Jubilee, an employees' gratuity scheme, which is described more fully later on, has also been introduced.

And so from a remote back room to the electronically-controlled factory at Barugh Green. The move here originated in 1945 when the firm could no longer expand in Huddersfield because of the acute shortage of female labour. First, a winding works, staffed by local girls already trained in Huddersfield, was started in an old flax mill in Barnsley where the firm moved at the suggestion of the Ministry of Labour. The experiment proved satisfactory and more rooms were taken over in the mill. Meanwhile the search for a suitable site on which to build a new factory continued, and one was found 4½ miles away at Barugh Green. Building began there in May 1951 and was completed in September 1952. The factory has actually been in production for more than a year, but it

The heart of the matter. The electronic control panel which one girl can operate comfortably.

was decided to make its official opening coincide with the firm's Golden Jubilee. Altogether, the site area covers 450,000 sq. feet and the present floor space 110,000 sq. feet. There is thus ample space for the expansion programme under which the number of employees is to be increased from its present 450 to 1,000.

The new factory houses, in addition to the Control Gear Department which was moved in its entirety from Huddersfield, a large winding department where electric motor stators from fractional sizes to approximately 5 h.p. are handled. Stator frames with stampings pressed in are brought by truck from the main works. Sets of coils are wound and inserted ; the wound motors are tested, then impregnated in insulating varnish and baked. They are then transported back to Huddersfield for assembly.

We now come to the electronic control system which is described in some detail as its basic principles can be applied to other manufacturing industries with all its consequent advantages to productivity and operators' wage packets.

The winding of stators in all sizes from fractional horse power to 5 h.p. is accomplished on an electronically controlled conveyor system devised and made by the Electronics and Production Planning Departments.

Three of these conveyor systems are in operation and the original design was for five parallel winding conveyors with working positions for thirty-seven stator winders on each conveyor, which have upper and lower belts the upper one bringing the work to the winder and the lower one taking finished work away. Each stator winder has a number and a spring loaded table at her station is connected to indicator lights on a central panel in the production control office, which maintains a supply of materials to the winders. No stator is supplied to wind unless all the material for the completed job is available. Thus a job is not held up half-way waiting for component parts.

Supposing stator winder No. 4 on conveyor 2 has a stator nearly completed on her winding ring and her reserve job is on the spring loaded table at the right of her bench. She completes the stator in the ring (the holding frame), slides it off on to the lower conveyor and slides her reserve stator into its place from the spring loaded table. This action lights a red signal lamp on the control panel indicating that a further reserve stator is required by winder No. 4 on conveyor No. 2. The clerk selects a work ticket, marks this number on it, presses a button which lights a green lamp alongside the red one, indicating that a job is on the way to that position, and passes the ticket to the person in charge of stator stock. The ticket and appropriate stator pass along the conveyor, collecting on their journey a tray with coils, sticks, insulations, terminal board and other necessary material.

The complete set of parts arrives at a central indexing station, where a controller diverts them on to the winding feed conveyor, and by means of selector switches for each conveyor sets it to stop at the working position indicated on the ticket and stator. This position is determined by a device that counts out the number of stations passed until it reaches the one selected, the starting of the counting being actuated by the stator interrupting a beam of light focused on a photo-cell a little distance from where the stator is despatched.

The conveyor cannot be re-started until the winder slides the job from the conveyor to the spring loaded table which automatically frees the conveyor, and extinguishes the lights on the control panel, to indicate that the winder's needs have been supplied.

The Automatic "Finder"

When the winder slides her finished work on to the lower conveyor it is taken towards the connecting stations and up a small ramp conveyor until it reaches another photo-cell which stops the conveyor until any connector needs a stator. The conveyor to the connectors is operated by the same process of spring loaded table and photo-cell with counter, but is entirely automatic in operation. An automatic "finder" is constantly checking round all the connecting positions ; immediately one of the spring loaded tables is released the next stator is automatically started on its journey from the feed conveyor, stopping at the connecting position from which the signal was received.

5 ELECTRONIC ADVANTAGES

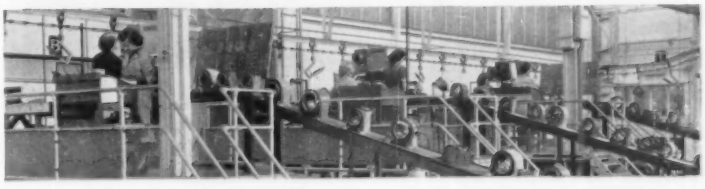
1. *The flow of work is swifter and more efficient.*
2. *The former trolley operatives have been put on to more interesting and better paid work.*
3. *Work has been made easier and safer since all lifting is done by mechanical means.*
4. *The factory is kept tidier and cleaner.*
5. *The improved flow of work means that girls can earn their maximum piece work bonus.*

The problem of electric motor production is the vast number of mechanical and electrical types. There are some 30 types of stator to be handled, 500 different variations of winding and voltage combined with 10 alternative speeds. Winding skill varies considerably and it is necessary to choose any one of the many combinations of winding detail for particular personnel capable of that type of work.

The principles behind the new layout are intended to cover this need ; the central control point enables suitable work to be selected with a minimum of effort, the light control panel ensures a check that the right job has reached the person for whom it was intended. Handling and paper work is kept to the minimum. Operation is completely controlled by one girl.

A basic order sheet, issued in the first instance by the Sales Office requisitioning the job, passes through the works departments to final despatch collecting on its way the various components such as stator and coils required, arriving eventually at the girl who is capable of winding that type without any intermediate labour problem. This has eliminated an enormous amount of paper work

(*Continued on page* 46)



Girls on the testing platforms. There is one at the end of each conveyor belt.

Raising Foremanship Standards—6.

A Unilever Blueprint for Instilling that "New Approach"

By ROBERT McKINNON

Unilever's residential training course for supervisors does not aim at making men more technically expert but at imbuing minds which may have become complacent with a fresh approach not only to their own jobs but to industry generally. We feature here the ingenious way in which the company set about this project. The results can never be measured by any standard test.

SIX years ago *Unilever Ltd.* started a residential training scheme for supervisors, original not only in conception, but also in design and in the methods of instruction used. Today, the courses continue with unflagging interest.

The object of the scheme is not to make the *Unilever* supervisors more technically expert in their jobs nor to single out for promotion trainees, who show themselves to be particularly bright. Broadly, the purpose is to help supervisors to adjust themselves to the changes that have taken place within recent years in industry. What the men actually learn on the course cannot be measured by any written examination, nor can the results of training be gauged by the subsequent conduct of the supervisor concerned when he goes back to his job. Yet, for all that, the *Unilever* management feel that these courses contain something of real worth even though the factors involved are intangibles.

Within this broad purpose, some component objectives of the course can, however, be stated with greater clarity. These objectives are:—

1. To enable supervisors to broaden their outlook by exchanging ideas and experiences with colleagues from other parts of the *Unilever* organisation.
2. To give them an insight into the problems that the senior management has to tackle.
3. To enable them to widen their knowledge of the principles of supervision and of general industrial subjects.
4. To learn something of the activities of *Unilever* as a whole.
5. To enable supervisors, by visiting factories of other firms, to compare problems and see something of the methods used in solving them.

Informality is a keynote of all talks.

In other words, the Company intends that the training courses should tone up minds which may have become complacent through doing the same job year in year out, and impart a greater awareness of the industrial world outside. The supervisors learn that there is a lot to learn, that what they already know is often a knowledge shared with others, and that they are not alone in having difficulties to overcome. The training courses attempt to make them see things as a whole and see them in perspective.

Whether such an objective is undertaken in academic cloisters or in the midst of an industrial empire, it is never can easy task. To appreciate the training methods adopted by *Unilever*, it is necessary to say something about their organisation in the United Kingdom. Here, the Company has some 40 factories which vary greatly in size. The largest employs nearly 8,000 people, there are several with 1,500 and over, while a number have under 500. Working in these factories are some 700 supervisors, most of them men over 40 with long practical experience. The Company consider that the main part of their training is best conducted in the local company to which they belong, the residential training scheme being complementary to "on the job" instruction.

When this part of the scheme was planned, it was decided to take supervisors right out of their factory

environment, the assumption being that fresh surroundings help to build up a fresh approach. Medicine often prescribes this, so why not industry ! For many reasons, London was the obvious choice ; it would take supervisors right away from their factories ; it would be convenient for the speakers and lecturers ; and it is a good centre from which to pay visits to factories of other companies. A suitable home was therefore sought and found in a Kensington hotel where the courses have been held since their inception.

On visiting the hotel, I was struck by the happiness of the choice. Many industrial courses and conferences somehow have an all-pervasive aura of "shop" even during social occasions. Delegates or trainees, often complete strangers, take refuge in the common factor which has brought them together. There is a desperate attempt to be informal which only defeats its purpose, and the ever present literature, badges and pamphlets does not help to break down an initial shyness. This, however, is not the case at South Kensington. In next to no time, supervisor is speaking to supervisor as one friend to another and one is left with the impression that these are not mere "friendships of contiguity." A lot of "shop" is spoken, but mutual problems are discussed out of sheer interest and not because somehow there seems nothing else to talk about. There can be no doubt that the informal atmosphere of a residential hotel has helped immensely in creating this background.

The duration of the course was also carefully worked out. It was appreciated that it must last long enough for supervisors to get to know each other really well and give them time to absorb the many different topics on the syllabus : yet it must not be so long as to cause boredom or prove too much for men who had lost the habit of prolonged study. Thus, three weeks was decided upon, with 16 members on each course.

During this period, each supervisor receives an allowance over and above his salary, to enable him to live the hotel life without worrying about the cost. In addition, each is offered free travel home each week-end, or his wife can use his ticket to travel up to London and stay at the hotel. If a member wishes to remain in the hotel over the week-end, the company bear the cost, but the member is himself responsible for his wife's accommodation.

The courses are organised by a Resident Organiser who is responsible to the Education and Training Officer of *Unilever* Personnel Division. The Organiser arranges the programme, finds suitable speakers and briefs them on the part they are asked to play. He also plans visits to factories and other places of interest, and deals with general administration. While the course is in operation, he is assisted by two young managers who attend for one course only and are called Group Advisers. Each is attached to a group of eight supervisors as a background consultant with the task of helping the group to the stage where it makes its own decisions on course "projects" and problems. In turn, this system gives the Adviser an excellent insight into the problems and outlook of the Company's supervisors.

7 FEATURES OF THIS TRAINING SCHEME

1. For the duration of the course, supervisors are taken right out of their factory environment to the informal atmosphere of a London hotel.
2. Each course lasts three weeks : long enough for the purpose of the training, but not so long as to cause boredom.
3. Course members are paid a generous allowance, in addition to their salaries, to enable them to live the normal hotel life.
4. No reporting back is done on whether or not trainees distinguished themselves on the course.
5. When members first assemble, each gives a short account of who he is, what he does, and so forth.
6. The syllabus covers all manner of topics and includes visits to the factories of other firms as well as lectures from outside supervisors.
7. The courses are particularly welcome because they make it clear that supervisors are regarded as members of the *Unilever* management team.

The First Meeting

Members of each course assemble on a Sunday afternoon. After tea comes the first session at which each member gives a short personal biography—who he is, what he does, and so forth—which speeds up the process of getting to know each other. The course proper begins on Monday at 9 a.m. with a talk on the Method of Instruction by the *Unilever* Education and Training Officer. Each working day lasts from 9 a.m. to 6.30 p.m. except Fridays when members are free from lunch-time.

Subjects covered are divided into three main categories: Problems of Supervision ; General Industrial Subjects ; and Subjects Connected with the *Unilever* Business which together with Visits to Places in London is grouped under the heading "General Knowledge." Speakers keep their talks as informal as possible and limit them to 45 minutes, the same amount of time being left for questions. Frequently the speakers are senior managers in *Unilever*, experts in their field and known to the course members by name and reputation. All this increases the interest shown in what they have to say.

The Problems of Supervision part of the course is tackled in two ways : by arranging for foremen from other firms to come and talk about their jobs and problems (conditions may vary but the job of supervising groups of people is often similar).

Under General Industrial Subjects come such matters as Joint Consultation, Production Study, Good Housekeeping, Negotiations with Unions, the Personnel Department's Relations with other Departments, Training, Health Provisions in Industry, the Factories Acts, Marketing and Transport. The number and variety of their subjects give members some awareness of what modern industry involves, but there is no attempt to make them authorities on the subject under discussion.

Subjects connected with the *Unilever* Business are included as an important part of the course for the very good reason that the organisation's associated companies are far-flung, and a supervisor from one company

(*Continued on page* 43)

Bring Mother Along

AT the factory of *T. J. Smith and Nephew, Ltd.*, of Hull, an "open house" scheme is now being operated. All employees are now permitted to invite one guest each to a tour of the factory. Each Tuesday for the next few months a party of 25 visitors will be conducted round the factory and later entertained to tea in the canteen.

Irrespective of the employment which their daughters take up on leaving school, most mothers feel a certain amount of concern for their welfare. As a large portion of the company's labour force come under this category, the management feel that mothers will welcome the opportunity of seeing their daughters at work during the course of an average day. Under the new scheme relatives will be able to see at first hand the conditions currently prevailing in modern industry.

Gas Gallery

A NEW gallery devoted to the history of gas manufacture, its distribution and its by-products up to the present day, has been opened at the Science Museum, South Kensington. The gallery, which is executed in a modern and attractive style, illustrates not only the beginnings of the making of gas, first for lighting and then for heating, and its industrial uses, but also the later uses of the many by-products of coal created through the gas-making process. It is designed to interest both layman and expert.

A cyclorama running the whole length of the gallery depicts in lively form London's gas-lighted streets in 1812, the gas-lit scene at a Mansion House ball as long ago as 1830, private house lighting thirty years ago, and the advent of the incandescent mantle sixty-four years ago. Models representing gas works in 1890 and 1950 show the progress of the machinery for gas making.

Safetygraphs

A NEW method of teaching safety consciousness in industry has been made available by ROSPA Industrial Safety Division. By means of safetygraphs—suitably placed where small numbers of workers can be gathered together—a speaker can lecture to the workers from the text, which is boldly printed on his side of the safetygraph, whilst displaying an appropriate picture on the front for display to his audience. The safetygraph forms its own stand and only requires a bench or a box in order to be placed at a convenient height. An experienced lecturer is not required and safe working practices can easily be taught by a foreman or chargehand. Each picture shown measures about 18 in. by 24 in. and is so drawn in colour as to be plainly seen by workers sitting or standing 20 feet away. The speaker turns over the pictures at intervals that suit himself, allowing for time for any discussion or questions.

REMPLOY'S PROCEDURE AND PURPOSE

ON May 22nd, Mr. D. R. Molloy, Industrial Relations Officer of *Remploy*, addressed delegates to the second Annual General Meeting of the National Spastics Society at County Hall, Westminster, on the subject of the employment problems of handicapped persons. This subject was of especial interest in view of the fact that the Society has already acquired excellent premises at St. Leonards-on-Sea for use as a Home and Sheltered Workshop for Spastics and, through the generosity of good friends of the Society, has been given the use of buildings at both Croydon and at Ware for a similar purpose.

The total number of severely disabled persons at present employed in the *Remploy's* 90 factories is 6,200 ; of these 43 per cent are disabled ex-Servicemen, 250 spastics and only 7 per cent women. The average age of employees is about 45 years.

To be eligible for employment in a *Remploy* factory, a disabled person must be registered at his local Employment Exchange and be considered by the Ministry of Labour to be in need of sheltered employment. *Remploy* carry out the selection of suitable candidates and each works manager has the services of a part-time medical officer who advises him in regard to the working capacities and functional limitations of potential employees. *Remploy* have a Principal Medical Officer at Head Office who is in overall supervision of medical policy. Provision is also made for periodic medical examinations of employees.

Administrative Set-up

For the purposes of administration and management the factories are divided into trade groups with a controller in charge of each group. Each has a trained staff to deal with all technical matters such as production planning and control, buying, etc., and at Head Office there is a design and development department.

Remploy are mainly concerned with the man's functional ability or capacity rather than with the disability itself, and it has been found from experience that, given the right mental attitude and suitable work, useful employment can be provided for disabled persons who were previously thought to be completely unemployable.

Although the employment of the severely disabled is the main purpose and rehabilitation as such is a long term policy, *Remploy* are not infrequently successful in transferring to open employment disabled employees who find after

Prototype Hostel for Rheumatics

CLAIMED by its sponsors—the British Rheumatic Association—to be the first voluntary establishment of its nature in Great Britain, a new experimental hostel for rheumatics was opened recently by Miss Pat Hornsby-Smith, Parliamentary Secretary to the Ministry of Health, at Bracken Hill House, Northwood, Middlesex. The new hostel will be able to accommodate up to 25 persons in the immediate future, and, ultimately, will be equipped with 52 beds, including the provision of flatlets for elderly chronic sufferers. The president of the Association, Lord Nuffield, has guaranteed it against loss up to an annual amount of £1,000 during the first two years.

Bracken Hill House. Industry's support is sought.

a period of employment in their factories, they are able to hold their own outside.

In view of the fact that it is only within the past ten years that anything much has been known about the treatment of spastics, there are a number of adolescent and grown spastics who have had neither training nor regular treatment. It is believed, however, that after a period in the Sheltered Workshops when opened, many more spastics will be able to obtain employment.

Pedestrian Advice

A NOVEL contribution to Birmingham's Road Safety campaign is being made at the factory of *Joseph Lucas, Ltd.* Every day at 12.30 p.m. and 6 p.m. when workers leave the factory to board waiting buses a gramophone record, amplified over loudspeakers, is played to them giving the following injunction: "Attention please. As you leave the Works watch that traffic. Go easy and be careful. Stop at the kerb and look both ways. Be very careful when approaching the road. Don't take risks, take care. Better road behaviour please." Pointing out that the idea is at present in the experimental stage, a company spokesman said that it might be tried later at other factories.

Voices of Industry

ADDRESSING the annual convention of the British Association of Industrial Editors, which took place in London on May 28, the Parliamentary Secretary to the Ministry of Labour and National Service (Mr. Harold Watkinson) paid tribute to members of the Association for the part they had paid during the past year in boosting output and efficiency in industry and by presenting clearly and objectively the hard facts that faced us all in this country.

Works magazines undoubtedly had an unrivalled opportunity for putting over the truth where it is most necessary that it should be known. The works magazine could reach into all corners of the establishment and talk to the workers, the staff, the executives, in a familiar voice. Mr. Watkinson suggested that new means of presentation should be sought in order to place the economic facts before readers with the aim of stimulating informed thought by them.

Employment Code

NEW employees of the *Aston Chain and Hook Co. Ltd.*, Birmingham, will in future receive an introductory booklet in which the chairman and managing director, Mr. Noel Bond-Williams, extends the invitation to "Be critical of everything we do so long as you are a member of the company." He gives details of the company's employment policy which is based on the following: (1) Pay all members well and fairly for their work, and for taking their proper share of the responsibility for production; (2) provide all members with working conditions which will promote happiness and satisfaction in work and place them in the available work for which they are best suited; (3) provide suitable means for the training and education of employees, particularly where this will fit them for promotion; (4) fill vacancies in any grades by promotion of existing members, provided that there are suitable candidates available; (5) acknowledge the rights of employees, through their representatives, to examine and check methods and calculations on which time standards are based; (6) provide information on and discuss with members any policy changes affecting their interests and employment; and (7) reward merit, steady and consistent service and practical ideas contributing to the increased efficiency of the firm.

Where Ability Counts

LEAVING out the man or genius who flares up perhaps once or twice in a century, the amount of ability which enables a man to cut a very respectable figure in a Cabinet is extraordinarily low compared with that demanded in the world of industry and finance. (Lord Beaverbrook in "Don't Trust to Luck.")

YOUTH AT THE HELM

Brenda Edge, 16-year-old tracer in the design office of **Steels Engineering Products Ltd.**, Sunderland, steps out of the Coles "Colossus"—the world's largest mobile crane—after demonstrating how easily it can be controlled. A picture of the new "Colossus" appears on page 19.

From The House Magazines . . .

Fruitful Arrangement

ON the occasion of a Scottish Cup replay at Kilmarnock earlier this year, the B.M.K. Works, in common with most other works in the town, closed to permit the workers to see this important game. By agreement reached at factory level with the shop stewards the employees undertook to work on the following Saturday morning. As a result production at the Kilmarnock Works rose substantially that week. Where management and employees co-operate in mutual arrangements of the type carried out so successfully on this occasion there is no reason why production should be affected. **(B.M.K. News Bulletin, 3/4/54).**

Promotion List

A promotion list is kept by the Department of Personnel. The Partnership depends upon general managers, departmental managers, and similar officials to recommend any names that in their opinion ought to be added to this list. Any Partner who feels that his name may have been overlooked should either consult his immediate chief or general manager or registrar, or else communicate directly with the Department of Personnel. If in the end he still feels dissatisfied he should consult the Partners' Counsellor. **(The Gazette,** *John Lewis Partnership*, **8/5/54.)**

Map Instruction

One part of our Civil Defence training to date has been devoted to map reading. During these sessions instruction has been given on setting a map, finding a position, the use of conventional signs, scales, bearings and the grid system. This is necessary for if we were to receive a concentrated attack it may be essential to give map references in order to guide any Mutual Aid Units to the works area, due to surrounding areas assuming a different outline, especially when land marks have disappeared. **(WISC Group News, 5/54.)**

Magic Eye

The managing director of a well-known sweet firm was worried because a machine which wrapped toffees at the rate of 10 per second had developed a habit of chipping off a piece of each toffee during the wrapping operation. Engineers were unable to say what the fault in the mechanism was, so they called in John Hadland to photograph the action of the offending part. When this later appeared on the screen the fault was detected and remedied. This probe by high speed cinematography resulted also in a 10% rise in productivity on that type of machine. **(Roll Call, June, 1954)**

Early Birds

While in Germany, two of our executives paid a visit to Heidelberg to tour a printing works. After 6 o'clock in the morning they found it impossible to sleep. There seemed so much activity outside the hotel. When asking about this at the factory, they learned that everyone works from 7 a.m. to 5 p.m. and that managers and directors could all be found at their jobs at 7 a.m. **(Staff News Bulletin,** (*Krisson Printing Ltd.*) **June, 1954)**

How British Railways Restore the Injured Worker

By GERALD WARD

Following the lead of Vauxhall Motors Ltd., British Railways (Western Region) have established their own rehabilitation workshop at Swindon. We feature here this new development, thought to be the only one of its kind in Europe.

ONE of the most noteworthy features of industry to-day is the number of schemes which have been set up to conserve skilled labour, for which there is now a greater demand than at any other period in our economic history. Broadly, this is being done in two ways: by making increasing use of the older worker, and by the establishment of rehabilitation centres for the injured or disabled.

So far as the second of these is concerned, a most important development is that some industries are now setting up their own rehabilitation workshops—an excellent example is the scheme operated by *Vauxhall Motors Ltd.*—thereby not only relieving the pressure on Government centres and factories, but enabling the injured worker to receive a recovery training more in keeping with the demands of his job. For this reason, the new rehabilitation workshop opened by *British Railways*, Western Region, at Swindon, is of particular interest and importance.

A special problem is incurred when the man who is injured is a skilled worker in a railway workshop. The heavy nature of the work, which involves, among other things, the construction and repair of railway engines and rolling stock, usually means that an injured person has to stay away from his job for a much longer period than is the case with men employed in lighter industries.

According to the Report of the Ministry of Transport and Civil Aviation on *Railway Accidents in Great Britain for 1952* (containing the latest available figures) some 200 railwaymen lost their lives during that year as the result of various classified types of accidents. Of this total, 30 belonged to the Western Region. In addition, 1,889 railwaymen were seriously injured, of whom 379 were employed in the Western Region. Slight casualties totalled 15,378 and 3,134, respectively. A further analysis of these statistics indicates that by far the greatest proportion of the total casualties were *Non-Movement Casualties* (national total, 14,815 ; W.R., 2,950).

In view of these figures it is not difficult to appreciate the important work to be done by the Swindon rehabilitation centre, which is thought to be the only one of its kind in Europe. There is normally little call for light work in a railway workshop and, where available, it may already be used to sustain in employment those who, by reason of injury, illness or advancing years, have some *permanent* incapacity. It was principally for this reason that the need for a rehabilitation workshop in the large works at Swindon was felt. Its object is to provide *productive* work for convalescent patients, plus an occupation of therapeutic value, by adapting machinery to provide a form of graduated work to a selected group of muscles.

Daily visits to the workshop are paid by a medical officer who considers the work of the cases employed in consultation with the workshop foreman, who is responsible to the carriage and wagon works manager for the day-to-day administration of the shop, the machine maintenance, development and discipline. A record is kept of the types of work undertaken by each patient and an attempt made to provide several kinds of job during a working period so as to prevent boredom and fatigue. Most of the men working in the shop are fracture or orthopaedic cases who have been referred to the medical officer in charge by the Swindon accident surgeon with whom close liaison is maintained.

Measuring 150 ft. by 25 ft., the present workshop is located near the main factory entrance facing the road which serves it. It is designed ultimately to accommodate up to 50 persons, but it is proposed to build up to this number gradually in the light of experience gained with the smaller number now there. There are ten men currently employed in the shop and, to date, 42 cases have passed through. The interior of the building is decorated in light colours particular care having been taken to ensure that it is well lighted and ventilated. Accommodation includes lavatories, washing facilities, storerooms, offices and consulting rooms.

The main body of the workshop is occupied by benches and machines used by the convalescent workmen. Simple machine tools have been installed and the normal operating

HOW TO RUN A REHABILITATION WORKSHOP

1. Give the patient productive work, wherever possible.
2. Record the types of work undertaken by each and vary the nature of his tasks.
3. Pay patients at the basic rate for their normal work.
4. Bar chronic cases. These are likely to undermine morale.
5. Arrange for work to begin later and finish earlier than in the works proper so that patients may avoid the rush periods.

levers replaced by others specially adapted to exercise various muscles and joints. Light machines have been or are being adapted to be driven by hand or foot, and, in order to vary the work, certain types of light bench work—such as filing and assembly of small components—are also provided.

Subject to certain exceptions, a time limit of eight weeks has been imposed on patients. Chronic cases are not admitted as these may adversely affect the morale of those for whom the whole object of their course in the workshops is the recovery of full function in the shortest possible time. Those men requiring physiotherapy while undergoing rehabilitation are referred to the Specialist in Physical Medicine, whose treatment centre is situated within 200 yards of the workshop. Apart from accident cases, it is hoped to provide for those who have undergone an operation or long periods of illness and with this end in view all local general practitioners have been asked by circular to refer such of their patients, who are railway employees, for rehabilitation work.

Men undergoing rehabilitation training are paid at the basic rate for their normal work but, for obvious reasons, this will not equal their normal earnings where piecework is involved. Work in the shop begins ten minutes later and finishes ten minutes earlier than is customary for Works employees enabling patients to avoid the rush period.

Widespread interest has already been evoked by the scheme and encouragement has come in from all quarters. In particular, the railway authorities readily acknowledge their debt to the *Vauxhall Motors* organisation who went out of their way to aid the launching of the scheme and who, by freely giving advice and in throwing open their own methods to study, have performed a great social service.

Patient at work assembling a vacuum brake detail.

Reducing Noise in Industry—3

How to Improve Acoustics in the Office

By G. WITTENBERG, A.M.I.Mech.E.

As on the shop floor, unnecessary noise in the office impairs efficiency and increases nervous tension and fatigue. In this, the final article of the series, the author tells how much of this noise can be siphoned off. He also points out the need to keep a check on the acoustics once silencing has been achieved.

LAST month I ended with a reference to modern techniques which enable heavy structures to be replaced by much lighter ones with virtually no loss in noise-reducing properties. Reference was made to such materials as glass fibre and acousti-celotex which trap sound waves in innumerable small cells.

By this method, sound energy is transformed into heat which is harmless. One might think that the fibres would rapidly heat up under this treatment but, in fact, the energy in any normal sound is so small that this is not true and any sound transformed into heat is readily dispersed by normal conduction and radiation. In practice, for instance, if everybody in a large city, such as Coventry, were to start talking at once in a normal tone of voice and if this sound energy could be transformed entirely into electrical energy, then it would not give sufficient current to light even one small electrical lamp. As our American friends have so picturesquely expressed it : "All the oratory of a presidential campaign is insufficient to fry a gnat's egg."

However much we can reduce noise at its source and damp down the airborne and structure-borne noise en route, there will still be a modicum of noise. In particular, all offices in the vicinity of highways and roads are subject to an additional and continually varying noise impact caused by the traffic. This noise is particularly difficult to deal with unless the revolutionary step of eliminating all windows is taken. Since, however, windows are needed, it is necessary to produce acceptable working conditions in offices facing noisy streets by a suitable arrangement of materials, selected for their acoustical properties.

Some Simple Aids

The simplest form of such material is in the normal furnishings of a room. Not only do carpets, matting and linoleum damp down the noise of footsteps of people overhead, but they do much to absorb noise whether this comes from inside or outside the room. This is also true of curtains, cushions and even human bodies. The effect of furnishings can readily be seen by comparing the noise, including echoes, in an empty house with that in the same house when fully furnished.

Scientific regulation of acoustical properties of a room can be most easily obtained by the use of one of the many forms of insulating and damping panels now available. These are made in different forms to deal particularly with the most distracting frequencies in the noise at any given position. The panels may be mounted on walls and ceilings without any alterations to the structure of the building to minimise installation costs. Tiles are also available for a similar

purpose and both these and the panels can be applied to give a most attractive and decorative finish in canteens, board-rooms, and in offices where appearance is important.

Where the walls are covered or such panelling is not convenient for other reasons, pendant structures are also available which look like attractive lighting fittings. These structures are carefully designed and have proved extremely effective in reducing noise.

Finally, much can be done by the use of plasters containing such materials as exfoliated vermiculite, and even by spraying the walls of a room in a special way with fibres of asbestos or glass so as to build up an appreciable thickness of damping and insulating material.

Even in an office, segregation of quiet and noisy machines should not be neglected. The use of "noiseless" typewriters has a surprisingly large effect on the ambient noise level, but even with a normal typewriter much can be done by placing it on suitable mats, as the following test case shows.

The ambient (general) noise level in the office used for the test was 42 db (decibels). When placed directly on a sheet-metal desk, the typewriter noise was 71 db. The same machine, being worked on by the same typist, registered only 69 db on a solid-steel-topped table and only 68 db on a robust wooden desk. A rubber mat further reduced the noise level to 67 db and this figure is quite acceptable in a general office. By using a kapok-filled cushion, the noise level meter reading was reduced to 64 db. A noiseless typerwiter would, of course, be initially less noisy, but in this case, too, similar improvements can be achieved by using proper mats and solid desks.

Once silencing has been achieved, a continuous check should be kept on noise to see that carelessness or the installation of new and noisy equipment does not lead to a gradual worsening of conditions until they again become a deterrent to production. Instruments of the type already described will also be found useful for such duties.

In very noisy industries, an effective way of preventing injury is by the institution of a system of placement audiograms on all new labour joining the firm. An audiogram is a chart on which the sensitivity of the ear to sounds at various frequencies is mapped after careful tests. If regular audiograms are then taken on all personnel, damage due to exposure to noise can be detected at an early stage and often even before the subject himself becomes aware of his hearing loss.

An early drop in acuity shown by the audiograms indicates that the worker is particularly susceptible to noise. Once the hearing nerve is damaged there is little that can be done either medically or surgically to repair the damage; it is, therefore, important that immediate protective measures be taken.

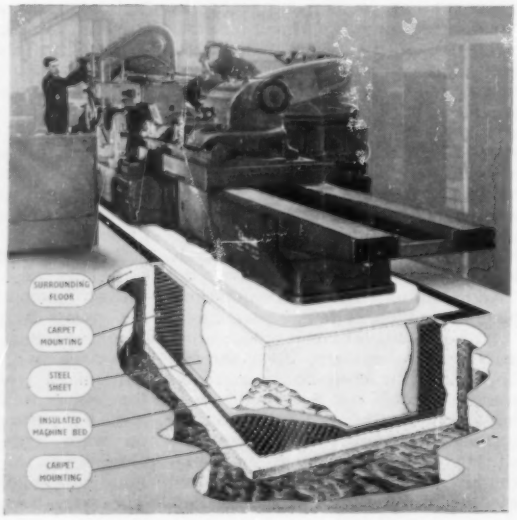
If it is impossible to alter the environment, the next best thing is to supply the sufferer with ear defenders. If worn, these normally provide an effective solution in very noisy surroundings. They do, however, eliminate speech communication between workers and may be a grave handicap in cases of emergency. If sensitive subjects are not given immediate protection, the picture of deterioration is fairly marked. The individual becomes aware of his loss of hearing and eventually requires a hearing aid.

If measures are still not taken, complete deafness may follow.

Cerebrotonics and Others

The individual who is unduly sensitive to noise is known medically as a "cerebrotonic." Such people are usually artistic, intelligent and highly strung. They are obviously poor prospects for any noisy employment. At the other extreme is the "somatotonic," who is unhappy unless he is in a really noisy atmosphere. The somatotonic is usually both hearty and clumsy. He sleeps very heavily and snores while he sleeps. It is often the somatotonic who is at the centre of a very large proportion of all "non-mechanical" noise. Recent American research has shown that 10 per cent of the population is responsible for no less than 90 per cent of the noise. Typical of this work was the study of the applause at big baseball games. Here it was found that out of each hundred, only about 15 people shouted at even the most exciting points of the game. **The great majority of the noise is made by a small section of the community, irrespective of the circumstance.**

This clash of personality is perhaps the worst effect of noise. The cerebrotonic makes no secret of his dislike for the somatotonic, whom he considers to be unprincipled, irresponsible and inconsiderate. The latter, on the other hand, does not even realise that he is being unduly noisy and the "unjustified" opposition only rouses him to fresh outbursts of noise. Insufficient work has been done on this subject to be able to lay down any hard and fast rules as to what factors cause a man to be either a cerebrotonic or a somatotonic. Until this is known, the most we can do is to guide those few to whom noise is a pleasure into what are, at present, unavoidably noisy jobs, and to place the remaining 90 per cent into as quiet surroundings as possible. It has long been the practice for the personnel departments of certain lampmaking firms to channel extroverts into the really monotonous jobs. It should be possible to follow a similar line on noise.



This roll grinding machine in a Welsh steel works weighs 42½ tons and it rests on a 45½-ton foundation. It is completely isolated by the **Dunlop** rubber carpet mounting from vibration caused by the adjoining rolling mill. The maximum movement of the mounted foundation is ·00005". The same principle on a much smaller scale inheres in the use of rubber mats to reduce the noise made by office machinery.

Should Group Selection Tests Replace the Interview?

I AM always pleased when this discussion page seems helpful to people from overseas. Mr. O. S. Jones, of Warimia, Essequibo, British Guiana, writing, as he expresses it, from a colony which is "now on the brink of exploring the void," says it is luckless (for me) "that I am a colonial and cannot really contribute to your monthly columns and so infuse in them the point of view gleaned from activity within a cosmopolitan community especially as there have been several previous problems which tickled my experience in human relations . . . nevertheless I have found your column thought-inspiring and idea provocative."

Mr. Jones then takes up the discussion on interviewing and says he thinks that an experienced *interviewee* has the advantage over an inexperienced *interviewer*. Interviewing is in fact a skill which has to be practised.

Two ex-army personnel selection officers come down very heavily on the side of tests. Mr. J. B. Greenwood, of Loughton, Essex, writes: "As an ex-army personnel selection officer, I was most interested by the question 'Can intelligence be gauged at the interview?' I do not think that the success achieved in the Army could have been accomplished without the use of a battery of tests, which, however, take some time to administer and could hardly be appropriate to a civilian organization." Mr. Greenwood found a close connection between the way a man filled in his application form and his test and interview results, and he suggests that "here is something involving very little extra trouble that might be followed by personnel officers who hope to get the maximum information out of an interview."

Late Chief Instructor, Mr. G. J. P. Moorhead, of the War Office Selection Centre, spent four years interviewing candidates for commissions in the British army. He writes:

"My experience of some two thousand interviews has led me to the conclusion that it is extremely dangerous to attempt to assess pure intelligence on the basis of an interview."

Mr. G. W. Bonnick, of the College of the Venerable Bede, Durham, is equally definite in his views. He writes:

"The best method of assessing abilities is by the use of tests designed specifically to measure those abilities. The interview cannot be depended on as a method of selection. Experimental evidence has proved it unreliable and invalid."

Well, here are three people who view the selection interview with some mistrust—at least as an instrument for assessing ability. Can we say something in its favour?

***DISCUSSION LEADER** comments on two theories this month. The first claims that the interview is an outmoded method of picking a person for a job which requires intelligence and that group selection tests give better results.*

The second is that women, including those in supervisory posts, do not have the same urge as men to get on in their jobs because their fundamental aim is to get married.

What are your views on either of these propositions? As always, we will be very glad to hear from you and will pay one guinea for each letter published.

Mr. Bonnick points out quite rightly that the purpose of the selection interview is "to predict ability to do the job"—so for example we need people of low intelligence matched to jobs which require little intelligence for their performance. I am reminded of the story of the girl who took a job in a marmalade factory and was told to sort oranges which slid towards her down a chute, into three baskets. Big oranges were to go into one basket, medium sized into another and the smallest size into a third. The girl did this for a week and then asked for her cards. "Why, aren't you happy here?" asked her foreman. "Oh yes!" said the girl, "I like the place all right, but it's the job. All day long—decisions, decisions, decisions!" This girl's intelligence had obviously not been assessed aright at her interview!

Some firms, feeling dissatisfied with the interview, are trying to supplement it with "group selection tests" adapted from those used in the selection of officers during the last war. About six candidates are set problems to solve as a group or given a topic to discuss. A recent topic for example given to a group of people who had applied for the job of a training officer was, "70 per cent of the people in jobs in this country are square pegs in round holes, and this can't be altered. Do you agree?"

Meanwhile the reactions of the individual members of the group are carefully watched by two or more observers. In this way a clearer picture is gained of a person's "social intelligence" of the way he mixes with others, and of the roles he plays in a group. This is the kind of information which it is vital to have when choosing supervisors and future managers. Have any of you been chosen for your present job with the help of this method?

THE FAIR SEX AS SUPERVISORS

Are Women Poor Team Workers?

AND now we cannot spare any more space for our experts on selection, because we have a group of women readers writing indignantly to have a say. They are all very annoyed with the recent decision of an American air line to sack their air hostesses when they reach the age of 32. Here are some typical comments:

From Miss Ann Heys, of Oldham: "Attraction is not a matter of age, in fact experience of life brings in its train quite often added attraction. Beauty is but skin deep, and the personality and assurance gained by experience gives often an aura of beauty to its owner even if she is not possessed of Grecian features . . . her mental ability can be like good wine . . . more stringent, more potent, more efficient—and more palatable!"

Miss Joan Honey, of Greenford, Middlesex, says: "I have been very interested in the controversy aroused by the decision about the American stewardesses, although I am still far enough from the fatal age not to become querulous on the subject.

"To me it seems as unsafe to attribute certain traits to all members of one age-group as it is to look for

(*Continued on page* 34.)

I.C.I. on Work Study

MORE than 800 industrialists—representing many different industries—attended the first Work Study Conference of the British Institute of Management, held at Harrogate between May 27-29.

An outstanding feature of the conference was the diversity of industries catered for, and the discussion groups at which the application of work study to these industries was considered. Over 30 directors, managers and work study specialists from *Imperial Chemical Industries, Ltd.*, gave an exposition of general principles, scope and various applications of work study from experience within their organisation. Another large group attending the conference comprised 30 members of the *National Coal Board.*

Among the industrial groups catered for were Engineering, Warehousing and Distribution, Food, Cotton, Steel, Clothing and Building. The attitude of the trades union to work study was very ably presented by Mr. E. Fletcher, secretary of the Trades Union Congress Production Department.

I.P.M. Are Impressed

THE Slough, Reading and Oxford groups of the Institute of Personnel Management recently visited the works of *Messrs. Huntley, Bourne & Stevens*, the Reading boxmakers. The visitors were impressed by the company's welfare facilities and safety precautions. The outcome of the meeting will be a joint group dinner and dance at Reading in October.

S.I.C.D.O. Form New Group

A LONDON group of the Society of Industrial Civil Defence Officers has been formed consisting of all members of the Society whose main duties lie within the Metropolitan Boroughs of the L.C.C., that is, Groups 1, 2, 3 and 4 of the London C.D. Region. Office-holders in the new Group are as follows: chairman, G. A. Petty, *Prudential Assurance Co., Ltd.*; vice-chairman, L. A. Stainton, *W. H. Smith & Sons*; honorary secretary, A. H. Durrant, *Rootes Cars*; management committee—D. E. Caldwell (*Ford Motors*), M. H. Dennis (*British Industrial Solvents*), T. H. A. Taylor (*Tate & Lyle*) and G. J. Wright (*B.B.C.*).

One Service for Disabled

THERE are roughly 850,000 people on the Disabled Persons Register of the Ministry of Labour, and at present all but 6½ per cent of them are in employment. That rate of unemployment compares with less than 2 per cent for able-bodied people; even so, it may appear as reasonably full employment for the disabled—until it is realised that the Ministry's register leaves out a wide fringe of disabled people who cannot work in open industry, many of them not maimed, but housebound through chronic illness. Sir Harry Platt has recently argued that some central body should be set up to co-ordinate the present multiplicity of services that affect employment or welfare of disabled people—a view that has already been urged upon the Piercy Committee, which was set up to co-ordinate the present existing arrangements. The primary disadvantage that arises from the independence of the services provided by the Ministries of Health, Education, Labour, the local authorities, and the many voluntary organisations concerned is simply that nobody really knows the dimensions of the problem. (**The Economist**, 15/5/54).

An Exacting Course

EXAMINATION successes for the 1953 Autumn session recently announced by the Technical Training Bureau of the *National Federation of Dyers and Cleaners* showed some 52 passes out of a total of 60 entrants. An award for the Bureau's *Best Student of the Year* was won by Mrs. Grace Lyall for her paper "Technology for Manageresses." The comprehensiveness of the curriculum is evidenced by the following extensive list of subjects taken: "Dry Cleaning Technology," "First and Second Year Spotting," "Technology for the Unit Cleaner," "Plant Maintenance and Engineering," "Garment Dyeing Practice," "Fabric Proofing and Finishes," and "Wet Cleaning Practice."

A large percentage of the students take the courses and examinations by correspondence, those overseas receiving the papers and questions and returning their answers by air mail.

APPOINTMENTS

MR. B. BLOMLEY, personnel manager to Blackstone & Co., Ltd., Stamford, since 1952, has been appointed personnel officer to the *British Tyre and Rubber Co.*, Leyland, Lancs. Mr. Blomley is member of Stamford and District Local Employment Committee, and has also served on the Peterborough and Stamford district committee for the recruitment and training of juveniles in the engineering industry.

MR. VICTOR C. H. CREER, a director of British Thomson-Houston Co. Ltd., has been elected chairman of the council of the Electric Lamp Manufacturers' Association for the year 1954-55.

MR. L. V. REDCLIFFE, former education and training officer of the light alloy section, *Richard Thomas and Baldwins Ltd.*, has been appointed safety and civil defence officer for the company's Midland section.

MR. R. L. WALSH, Master Cutler, has been appointed by the President of the Board of Trade to be a member of the Council of Industrial Design.

BIRTHDAY HONOURS

AMONG those listed in the Birthday Honours were **Mr. Eugene Cross,** personnel manager, *Richard Thomas and Baldwins, Ltd.*, who receives the M.B.E.; and **Mr. F. A. Wells,** head of the Department of Industrial Economics, Nottingham University, who was awarded the O.B.E. for service in industrial relations.

(*Continued on page* 44)

MINERS ON GOODWILL VISIT

A group of 36 miners from Water Haigh Colliery near Leeds recently paid a goodwill visit to Cadby Hall, headquarters of London caterers, **J. Lyons & Co.** Our picture shows them in the Cake Decoration Department, with their leader, 45-year-old Bob Slater, on the extreme right.

Small Canteens Set Model Standards

The main canteen at **Marston Valley Brickworks** combines brightness with comfort.

Two fine examples of industrial catering for the smaller unit are provided by the canteens described below. In each, comfort has been combined with efficiency to make the customer feel he is having a break as well as a meal.

PROVIDING round-the-clock canteen facilities for employees, a new welfare building has recently been opened by the *Marston Valley Brick Company Limited*, Marston, near Bedford, the manufacturers of fletton bricks. Comprising a works canteen seating 168, a staff dining room seating 60 and a foreman's dining room seating 20, together with kitchen, cloakroom and toilet accommodation, the new building has been erected on a site between the works proper and the main road and stands on a concrete raft supported at one end on concrete piers because of the difficult site conditions. Of single storey structure, the building, however, has a basement boilerhouse and second storey tankroom.

Above ground level, Marston sand-faced bricks in Flemish bond, with patterned brickwork around the main entrance, have been used to face external walls. Inside the building, hard wearing materials have been used —Devon red and biscuit coloured tiles for the floors, and oatmeal glazed tiles for shoulder-high wall linings. *Marston Valley* autumn facings have been used in the main entrance hall, while the kitchen is tiled in white up to the clerestory windows.

Centrally located between the three dining rooms, the kitchen is well equipped with modern labour-saving devices, an *Esse* solid fuel range being installed for the main cooking. All three dining rooms are equipped with cafeteria service for either full meals or snacks.

To avoid dirt traps, the main services are run in underground ducts wherever possible. There are two mechanically stoked interconnected boilers for hot water and heating. Either may be taken out of commission without interfering with supplies. The low pressure hot water heater installation feeds "force flo" fan operated convector units, which provide fresh or re-circulated air to the building.

The main canteen ceiling is of celotex painted delphinium blue, while the kitchen ceiling is of asbestolux. The hard wood structural joists of the ceiling to the staff dining room are exposed and polished. Doors internally are generally oak-faced, while the sides of the doors facing the kitchen are faced in buff formica.

Outside, the walls of the building are faced in the company's own sand-faced bricks in Flemish bond with patterned brickwork around the main entrance. The precast concrete is left in its natural colour. There is a deep overhang to the eaves, the underside of which is painted delphinium blue. The remainder of the external paint work is generally white with the opening lights of the large canteen windows picked out in Dutch blue. Entrance doors and rainwater piping are also in Dutch blue.

Canteen furniture is by *Cox & Co.*, while the cafeteria counters were supplied by *Gardiner & Gulland Ltd.*

JOHN GRINDROD

* *

IN the news during the past year has been the new Town Centre now under construction by the Crawley Development Corporation. And one of the latest items of interest to emerge from this pioneer project is the opening of the new *Lloyd's* Register of Shipping Laboratory, with its ultra-modern, ultra-efficient staff canteen.

While the canteen building itself is the creation of J. S. Hartley (architect in charge of the *Lloyd's* construction), furnishing, layout and catering arrangements came from a different

(*Continued on page* 46)

Lloyd's at Crawley have achieved a similar effect to which is added an air of pleasant intimacy.

CANTEEN ADVICE BUREAU

By L. BANHAM, A.R.San.I., A.M.H.C.I.

Fly Fighting

We are troubled with flies and find that D.D.T. impregnated cards hung around the kitchen seem to have little or no effect. What do you advise? (J. B., St. Albans.)

It does seem that D.D.T. impregnated cards are not nearly so effective when hung in a warm atmosphere as in a cool one. The answer lies in locating the source of the trouble and applying the remedy there. Often enough the source of the trouble is the swill and refuse bins. The bins should be kept in good condition and the lids kept firmly in place. Never have just enough bins to accommodate your rubbish and swill, for this limits the opportunity to ensure that they are cleared and cleaned effectively. A sufficiency of bins provides the chance of using them in rotation. Bins which are kept on metal or brick supports from the floor are more easy to clean around daily with a hose. A spray solution of a reliable type of insecticide (at the manufacturer's recommended strength) is usually quite effective.

Better Slicing

We find in making sandwiches with new bread that the loaf crushes easily when being cut into slices. Can we overcome this? (D. W., Neath.)

It is taken that you are using the quartern sandwich tinloaf from which you should get 40 slices. Try removing the top crust of the loaf before starting to cut into slices. Make sure that your knife is quite sharp, if you are not equipped with a slicing machine.

Reducing Humidity

Apart from the use of canopies and fans is there any other way of reducing condensation in the kitchen? (R.C., Coventry.)

In old and converted premises it is not always possible to fit canopies and fans over steam-producing points, but some measure of success is obtained from the use of cork insets in the ceiling. A plaster-board ceiling, by reason of being porous, is a further help in the reducing of humidity, and the prevention of condensation in the kitchen. Ceilings should be colour-washed twice a year with an absorbent kind of colour-wash which is easy to apply and not difficult to remove.

Preparing Cake Tins

Is it necessary to apply any special treatment to new cake tins before using them? (G. W., Purfleet.)

Some manufacturers attach a label to their products advising users of the correct procedure to follow with their particular products. Generally, the instructions are to clean the tins and then place in an oven for about 3 hours at a temperature of 350°F. in order to condition them. It is important that only good quality fat is used for greasing purposes, and it is equally important that care should be taken in cleaning cake tins and in storing them to avoid damage to shape. The tin-plate variety should not be so thin as to buckle easily, and the edges of the tin should be rolled to give strength and shape to the tin and avoid damage by way of cuts to the hands.

Efficient Scales

What kind of kitchen scales do you recommend for use in the canteen kitchen? (P. L., Willesden.)

It pays in the long run to choose the best that you can afford for efficiency depends on accuracy. The beam type are probably the best for use in the canteen kitchen, and the points to observe when buying scales are:

1. The size should be of sufficient capacity for your needs and the scales should be sensitive enough to permit weighing of small amounts.
2. Examine the weights to see if they are Government-stamped which is a guarantee of accuracy.
3. Choose scales which permit easy cleaning.
4. The scale pan should be made of stout metal and should rest firmly on the scales. Scoop shaped pans make for easy pouring, and are to be preferred to shallow pans. Pans which are enamelled should be avoided since the enamel will, in course of time, become chipped and minute particles might get mixed in with the food being weighed.

Pre-cooling Foods

We appreciate the reasons for not putting hot foods into the refrigerator, but are at a loss to know how to pre-cool hot foods before storage in the refrigerator when this is necessary.—(E. K., Birmingham.)

It is quite likely that the works maintenance staff could supply the answer to your problem by building a wind-tunnel of sufficient size to meet your needs. An electric fan is all the mechanical equipment needed; the rest could be improvised. To ensure rapidity of cooling, it is advisable to stand the food container on a metal grid which will permit a flow of air all around the food. An oven shelf might conveniently be used to support the food container during the cooling process.

Dried Fruits Packing

What are the usual packaging contents of dried fruits? (R. M., Glasgow.)

The following list is the normal package content of dried fruits. It is inadvisable to overstock since dried fruits are particularly liable to infestation if improperly stored.

Apple rings	50 lb. boxes.
Apricots	25 lb. boxes.
Currants	56 and 60 lb. boxes.
Dates	48, 70 and 72 lb. boxes.
Peaches	25 lb. boxes.
Pears	28 lb. boxes.
Prunes	25, 28 and 30 lb. boxes.
Raisins	25, 56 and 60 lb. boxes.
Sultanas	56 and 60 lb. boxes.
Figs	28 lb. bags, 56 lb. boxes.

The weights of bagged figs are variable and each bag should be weighed on arrival.

GROUP SELECTION TESTS

(*Continued from page* 31)

certain characteristics in all members of one nation. The qualities induced by age differ greatly. . . . There is, however, some ground for the idea that older women do not take kindly to being subordinate to younger women. Women are often not gracious team workers, and the combination of new ideas and experience is often lost. . . ."

Are women poor team workers? I don't know of any real evidence on this point, but perhaps some of our readers do. I *do* know that women are often reluctant to take responsibility—particularly supervisory responsibility. A woman does not feel the same urge to get on at work as a man; she can "sit quite happily at the bottom of the supervisory ladder without suffering damage to her self-esteem." Why? Because their main aim in life is to get married?

It has even been suggested in one quarter that some girls may feel that to climb the first rung of the supervisory ladder may actually *lessen* their chances of marriage. Many women have, of course, domestic responsibilities enough to keep their minds occupied, others are reluctant to risk the social isolation of a supervisor's job. Many women say they would quite like to become supervisors but lack confidence in their own abilities.

I wonder if at least some of this shyness and lack of confidence can be traced to the attitudes of some men towards women in authority in industry. The men *expect* the women to fail; the woman knows this, and so she is half-way to failure already. All new supervisors, both men and women, need an extra helping hand in their first inexperienced days. What form may this help take? What help did you receive as a new supervisor (man or woman)? We will discuss this further another month.

DISCUSSION LEADER

A Pension in 1994?

The man who will be an Executive Director in 20 years' time is not interested — at this stage of his career — in a pension 40 years' hence. He is, however, concerned to secure adequate provision for his family in the event of his death.

This need for family protection impels young executives — who cannot afford adequate life assurance — to seek employment where modern dual-purpose schemes provide either a pension on retirement or a substantial capital sum in the event of premature death.

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7 SOUTH PARADE, **LEEDS**, 1 · 21 COLLINGWOOD STREET, **NEWCASTLE**, 1 • 58 HOWARD STREET, **BELFAST**
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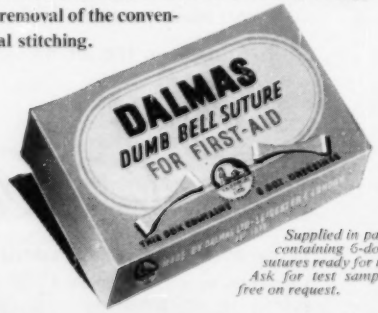

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New Industrial Equipment

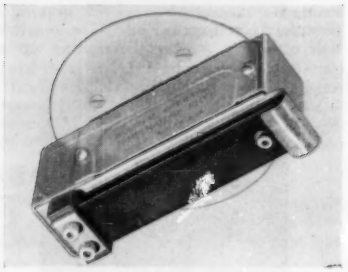
EXECUTIVES' SURVEY OF AIDS TO INCREASED PRODUCTION

Safety

Readers who wish to know the suppliers of any of the products referred to in this section are asked to write to the Editor, quoting the reference number which appears at the end of the paragraph. We are always glad to consider for publication descriptions — preferably accompanied by an illustration suitable for reproduction — of new products.

FIRE DETECTOR

THIS new automatic fire detector, say the makers, can be relied upon to give a positive warning of fire without false alarms. It is preset to operate at a given temperature and does not rely on the bi-metal strip to make the electrical contact. This is in fact made by tilting a mercury tube, the action of the bi-metal strip operating a latch which allows the bottom of the detector, to which the mercury tube is anchored, to tilt.



The detector contacts are capable of carrying a current of 3-amps at 50 volts A.C./D.C. and can be provided in two models—for open or closed circuit fire alarm systems. **(PM/799.)**

FOOT PROTECTION

NOW available are new safety shoes so constructed as to look like ordinary footwear but which incorporate a neatly concealed internal steel toe-cap and conform to B.S.S. 1870 and 953. These shoes, which have a special soling material, are said to be ideal for foundry workers or for factories where vegetable and animal fats and oils, acids and alkalis and lubricating oils and greases are used. Other features claimed are resistance to heat and cold, high flexing resistance and a non-slip sole pattern. Before release to the general market, the prototypes were thoroughly tested under working conditions. **(PM/800.)**

NEW RESPIRATOR

THIS new safety respirator is an improved version of existing models and incorporates the following new features:—

1. A re-designed rubber face-piece to give a more efficient and comfortable fit.
2. A new flexible wire spring assures proper fit for every face contour, claim the makers, which in conjunction with headband adjustment makes possible an airtight seal against the face with minimum pressure.
3. The screw front is now made of aluminium instead of plastic, while the metal parts are anodised. In addition, replacement of the head-band is now done by press-stud fastening in place of wire clips.

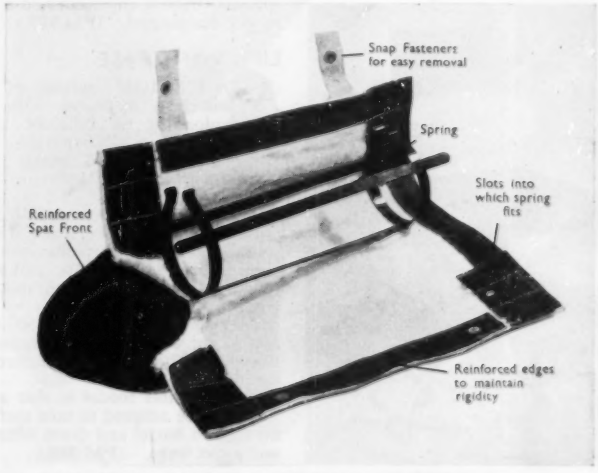
4. The whole is now supplied in a special carton designed to hold the respirator when not in use.

These variations are available: one for protection against dry dust and paint spraying, another for hot dusty atmospheres, and a third for protection against very fine dust. Protection in each case is against non-injurious industrial dusts. The complete respirator is 4 oz. in weight. **(PM/801.)**

NEW LEGGINGS

THESE new furnaceman's leggings consist of a spring frame with detachable cover of good quality asbestos cloth. The spring holds the cover rigid so that the asbestos cannot crumple or move out of position. The leggings need no fasteners though snap fasteners are provided for those who prefer them. Nor is there any fastener under the foot.

Among the advantages claimed for this new product are (*a*) it is cool to wear because the asbestos is not in contact with the leg, (*b*) in the event of hot metal falling on the legging it is instantly removable and (*c*) the spat front is so reinforced that it will not curl. **(PM/802.)**



WELDER'S HELMET

THIS new welding helmet is said to provide ideal protection for workers engaged in electric-arc welding. Its main features are as follows:—

1. Moulded of one-piece vulcanised fibre, without seams or rivets.
2. Due to its skull-fitting shape the weight of the helmet is evenly

(*Continued overleaf*)

distributed over the whole strap.

3. A free turning adjustment device is said to secure perfect fitting without any undue pressure, a few turns of the screw being sufficient.

4. The pivot assembly, insulated on both ends, attaches the helmet to the headgear and maintains constant tension at any adjustment.
5. The plastic composition lens holder has no metal parts and is attached to the helmet by means of patented fibre fasteners. It is removable and claimed to be leakproof.

The helmet is fitted with an adjustable chin-strap and weighs altogether only 1¼ lbs. **(PM/803.)**

Welfare

WORKS WARDROBE

THIS new 16-inch-deep locking basket hanger, say the makers, incorporates all the space-saving, airing, drying and hygienic features of their existing products, but is a *de luxe* edition giving far greater storage capacity so that sundry articles—shoes, handbags, shopping bags, etc.—can also be accommodated. The basket

section is fitted with a lid which can be padlocked to give complete security. The hanger is specially hand-finished to give an attractive appearance, and the makers report that the new model has already been adopted by a leading firm of chain stores at one of whose branches this picture was taken. **(PM/804.)**

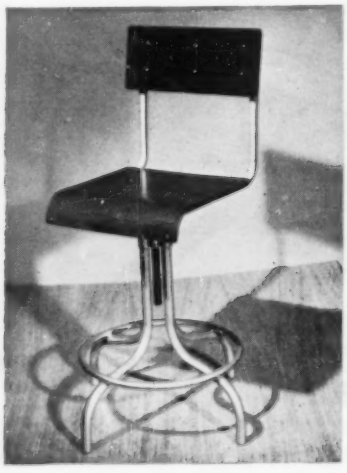
WASTE DESTROYER

THIS incinerator, say the makers, meets a need in factories, offices, schools and hospitals whose heating systems preclude the burning of refuse. All that is required is to connect it to the mains and provide a suitable flue. The control panel carries a timer which can be preset for periods up to one hour, this being adequate for drying and igniting waste matter. Complete destruction of such matter is ensured by the use of a hand-operated shaker hearth which also breaks up the ash and

prevents clogging. There is air gap insulation, the case being cooled by the air intake for combustion, and a double lid, the outer of mild steel plate and an inner heat-resisting steel cover. The capacity is 12 in. by 12 in. by 18½ in., and the finish is of stove-enamelled white. **(PM/805.)**

CHAIR COMFORT

THIS new chair is said to combine a robust construction with the maximum of comfort. The absence of adjusting knobs, levers and the like, say the makers, eliminates the need of after-service, while an adjustable back rest gives full support in the normal working



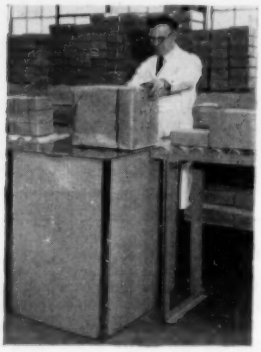
position without the need for manual adjustments.

Other features include adjustable back rests and P.V.C. coated *Armoride Florestin* covering which, say the makers, will not crack, peel or split, is flame-resistant and does not "shine" the clothes. Prices are stated to be extremely competitive for the type of chair offered. **(PM/806.)**

Efficiency Aids

AUTOMATIC BANDING

RECENTLY developed, this machine straps and secures boxes, cartons and irregular shaped packages without adjustment with ⅜ in. steel band. Tension is predetermined and applied uniformly irrespective of size or shape of pack. Tensioning and sealing are automatic, and the machine is operated by means of two foot pedals. Seals in coils of 5,000 and coils of strip of 1,000 feet are housed inside the machine framework making it completely self-contained. The machine will cater for packages weighing up to



100 lb., and one unskilled operator can apply up to 3,500 bands in one 9-hour working day. Servicing is carried out by specially trained engineers and a 24-hour service maintained. **(PM/807.)**

LIFT WITH EASE

A QUICK, safe method of moving materials by hand—with loading and unloading at different levels—is provided by a new "handraulic" truck. Its manually-operated pump will lift a maximum load of 2½ cwt. to a height of 3 ft. in 30 seconds.

All moving parts are made from high-tensile steel, while the truck itself is of welded tubular construction, with 10 in. rubber-tyred wheels. The makers claim that it is the cheapest hydraulic lifting truck on the market.

Overall dimensions are 50 in. high and 18 in. wide, and the unladen weight is 90 lb. The platform measures 20 in. by 16 in.

A convertible model is also available. This may be adapted to take such attachments as a barrel and drum lifting device and pallet forks. **(PM/808.)**

EASY TIMING

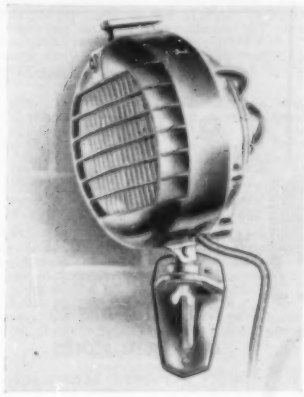
THIS new time recorder being shown for the first time has been designed for factories where shifts and meal times overlap. A device "clips" off a step down one edge of the card so allowing the card to drop one space further down the

card sheath at each successive registration. This makes the vertical positioning of recordings completely independent of the time factor and eliminates all possibility of overstamping. **(PM/809.)**

HEATER CUM FAN

THIS new heater has been specially produced for board rooms, offices, consulting rooms, canteens and the like. The all-electric model is produced in two types—wall-mounting and portable—each unit being fitted with an auto-thermal cut-out to safeguard the elements. This cut-out can also be operated manually so that the fan can be run independently of the heating section as an air circulator in hot weather. These models are available in two ratings, 2 kw. and 3 kw., for single-phase supplies only.

The makers have also produced a steam-operated model with electric motor-driven fan, the heating element being all-copper construction suitable for steam pressures up to 150 lb. per sq. in. **(PM/810.)**



Canteen

EASY WASHING-UP

THIS is a fully automatic dish-washing machine with cream stove-enamelled aluminium rustless cabinet and instrument panel, stainless steel angle strip facings

and toe-plate and stainless steel washing tank with movable racks to take about 48 pieces of crockery and 100 pieces of cutlery. The machine is designed also to economise on water, this being drawn from a four-gallon internal tank with a thermostatically controlled immersion heater for A.C. mains. As, therefore, the dishwasher does not depend on its water from an outside supply, it is a completely self-contained unit. The hourly capacity is as follows: crockery—336 pieces; cutlery—700 pieces; water used—26 gallons. The pieces are dried quickly by their own heat. **(PM/811.)**

You can get the man you want through a DAILY HERALD classified

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Commerce, Finance and Professions	390,000	Distributive Trades	250,000

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NEW TRADE LISTS

Prestcold Refrigeration Equipment (Publications Z.132/1). Pressed Steel Co., Ltd.

This little catalogue provides the key to the extensive range of refrigeration equipment manufactured by the company. Starting with the 3 cu. ft. domestic model, it lists a variety of service cabinets, conservators and freezers, fish cabinets, refrigerated display cases, sectional cold-rooms and dairy and milk cooling plant. The brochure includes several interesting illustrations of refrigeration units in the course of production.

Protective Clothing for Every Industrial Purpose. Wallach Bros., Ltd.

Featured in this catalogue is a wide variety of industrial protective clothing. Among items listed are goggles, gloves, respirators, aprons, smocks, overalls, leggings, heat resistant clothing, safety footwear and head protectors. The 20 pages of this booklet are well illustrated and describe industrial clothing designed for both male and female operatives.

Tea Please. Stotts of Oldham, price 2s. 6d.

The important part played by tea in Britain's industrial life is an accepted byword. This booklet outlines the 30 years of development since tea and refreshment services were first introduced in industry. Details are given of the company's wide range of equipment, together with much information regarding tea-making, care of equipment and methods of operating factory tea services.

Management Bookshelf

Mental Health and Human Relations in Industry. *Edited by* **Thomas M. Ling** (*Messrs. H. K. Lewis & Co., Ltd., price* 21*s.*).

THE first two chapters of this survey which is edited by the medical director, Roffey Park Rehabilitation Centre, cover the wider aspects of mental health and human relations. Succeeding chapters cover the contribution of the industrial medical officer, the personnel manager, the psychiatrist and the research worker.

All the sections were prepared by individual authorities on each subject, that on the personnel manager being contributed by Mr. H. Watton Clark, M.A., Boots Lecturer in Human Relations, Roffey Park Institute. Mr. Clark stresses that it remains necessary for many in industry to consider more closely the problem of the personnel manager's status and the role he is to play and, further, that the personnel manager himself should be aware of this situation.

Comprising some 265 pages, the book has a foreword by Lord Horder and includes a very comprehensive index to section and subject headings, authors, and references. To those responsible for others in industry, it should prove of considerable value.

Summary of Official Publications

READERS' GUIDE TO ACTS, STATUTORY ORDERS, NEW RULINGS AND AWARDS CONCERNING INDUSTRY AND PERSONNEL

STATUTORY INSTRUMENTS

No. 563. The Retail Drapery, Outfitting and Footwear Trades Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated April 29, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 3d. (The First Schedule amends Order R.D.O. 16 by altering the weekly minimum remuneration payable to certain workers in relation to whom the Wages Council operates by applying to shop managers and manageresses certain overtime provisions which did not apply to them before. The Second Schedule amends Orders R.D.O. 4 and 16 by (1) excluding from the Order's provisions workers who normally work for the employer for less than 9 hours in a week ; (2) substituting a new provision relating to the method of calculating the length of a period of employment qualifying a worker for an annual holiday or accrued holiday remuneration for that at present contained in the Order ; and (3) altering the definition of the word "month."). Operative from May 17, 1954.

No. 571. The Hairdressing Undertakings Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 3, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 3d. (Amends Order H.U. 12 relating to minimum overtime rates and guaranteed weekly remuneration and adds to the First Schedule of that Order a definition of "weekly short day.") Operative from May 21, 1954.

No. 598. The Paper Bag Wages Council (Great Britain) Wages Regulation Order, 1954. Dated May 7, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. (The First Schedule of this Order sets out the statutory minimum remuneration payable in substitution for that fixed by Orders P. 50 and P. 54. The Second Schedule amends Order P. 44 by adding to the customary holidays to be allowed to workers, any day proclaimed as an additional bank holiday or as a public holiday. Orders P. 50 and 54 are revoked.) Operative from May 24, 1954.

No. 606. The Food Rationing (General Provisions) (Amendment No. 2) Order, 1954. Dated May 10, 1954, made by the Minister of Food. *H.M.S.O.* 2d. (Makes a number of incidental amendments consequential upon the continued use after May 15, 1954, of the 1953/54 ration documents in relation to the remaining rationed foods, meat and bacon. In addition, certain deletions from the Principal Order have been made because of the de-rationing of butter, margarine and cooking fats.) Operative from May 16, 1954.

No. 608. The Meat (Rationing) Order, 1954. Dated May 10, 1954, made by the Minister of Food. *H.M.S.O.* 3d. (Replaces previous Orders, with alterations to permit the continued use of the 1953/54 ration documents.) Operative from May 16, 1954.

No. 609. The Aerated Waters Wages Council (England and Wales) Wages Regulation (Holidays) Order, 1954. Dated May 10, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. (Sets out the holidays which an employer is required to allow workers and the remuneration payable for those holidays, in substitution for the holidays and holiday remuneration fixed by Orders A. 42 and A. 49. Order A. 42 is revoked.) Operative from May 28, 1954.

No. 629. The Corset Wages Council Wages Regulation (Amendment) Order, 1954. Dated May 13, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 3d. (Amends Order K. 38, by increasing the statutory minimum remuneration fixed by that Order.) Operative from May 31, 1954.

No. 630. The Shirtmaking Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 13, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 3d. (Amends Order S. 43, by increasing the statutory minimum remuneration fixed by that Order.) Operative from May 31, 1954.

No. 663. The Wholesale Mantle and Costume Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 19, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. (Amends Order W.M. 52 by increasing the statutory minimum remuneration fixed by that Order.) Operative from June 4, 1954.

No. 664. The Ready-made and Wholesale Bespoke Tailoring Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 19, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. (Amends Order R.M. 58, by increasing the statutory minimum remuneration fixed by that Order.) Operative from June 4, 1954.

No. 677. The Boot and Floor Polish Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 21, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 2d. (Amends Orders B.P. 37 and B.P. 39, by increasing the statutory minimum remuneration fixed by those Orders. Order B.P. 39 is revoked.) Operative from June 9, 1954.

No. 693. The Rope, Twine and Net Wages Council (Great Britain) Wages Regulation (Amendment) Order, 1954. Dated May 24, 1954, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. (Amends Order R. 106, by increasing the statutory minimum remuneration fixed by that Order.) Operative from June 11, 1954.

INDUSTRIAL DISPUTES TRIBUNAL AWARDS

No. 528. Payment for Holidays in the Midlands Hosiery Manufacturing Industry. Claim: For an alteration in the existing holidays with pay agreement. **Award:** The Tribunal rule that (1) Holiday payments shall be at the flat rate of £1 10s. and £1 per day for adult males and females respectively, with proportionate rates for juveniles ; (2) forfeiture of holiday pay credits shall only apply in respect of unauthorised absence during the whole of the normal working day, other than Saturday, immediately preceding and/or after a statutory or summer holiday period ; (3) provision in regard to holiday pay credit in the case of industrial injury or certified sickness shall be put forward by the Employers as set out in Annexure F to their statement of case submitted to the Tribunal. (11/5/54.)

No. 529. Overtime Working in the Midlands Hosiery Manufacturing Industry. Claim: Employers' proposal for amendments to the clause relating to overtime in the agreement of the National Joint Industrial Council for the Hosiery Industry. **Award:** The Tribunal award that (1) reasonable overtime for men as and when required shall be worked by mutual agreement between the employer and the worker ; (2) overtime working for women shall be allowed by mutual agreement between the employer and the worker up to a maximum of six hours in any working week with an overall limitation of 100 hours in any working year ; (3) all hours worked in excess of 45 in any working week shall be paid for at a flat rate extra of 1s. 6d. per hour in the case of men and 1s. per hour in the case of women ; (4) in respect of any overtime worked after 12 noon on Saturday a further 1s. per hour shall be paid in addition to the above rates. (11/5/54.)

No. 530. Remuneration of a Chief Officer of the Devon County Council. Claim: That the County Council in implementing the Recommendations of the Joint Negotiating Committee for Chief Officers of Local Authorities should have placed the chief officer herein concerned (the County Treasurer) on a salary scale of £2,400-£2,700 per annum, or other appropriate scale within the salary range for a population of 400,000-600,000. **Award :** That the salary of the officer concerned shall be on the scale £2,300 per annum, rising by annual increments of £100 to £2,600 per annum. (14/5/54.)

No. 531. Remuneration of a Chief Officer of the Devon County Council. Claim: That the County Council in implementing the Recommendations of the Joint Negotiating Committee for Chief Officers of Local Authorities should have placed the chief officer herein concerned (the Chief Education Officer) on a salary scale of £2,400-£2,600 per annum or other appropriate scale within the salary range for a population of 400,000-600,000. **Award:** That the salary of the officer concerned shall be on the scale £2,300 per annum, rising by annual increments of £100 to £2,600 per annum. (14/5/54.)

No. 532. Remuneration of a Chief Officer of the Devon County Council. Claim: That the County Council in implementing the Recommendations of the Joint Negotiating Committee for Chief Officers of Local Authorities should have placed the chief officer herein concerned (the County Architect) on a salary scale of £2,400-£2,700 per annum or other appropriate scale within the salary range for a population of 400,000-600,000. **Award:** That the salary of the officer concerned shall be on the scale £2,300 per annum, rising by annual increments of £100 to £2,600 per annum. (14/5/54.)

No. 533. Remuneration of a Chief Officer of the Devon County Council. Claim: That the County Council in implementing the Recommendations of the Joint Negotiating Committee for Chief Officers of Local Authorities should have placed the chief officer herein concerned (the County Surveyor) on a salary scale of £2,400-£2,700 per annum, or other appropriate scale within the salary range for a population of 400,000-600,000. **Award:** That the salary of the officer concerned shall be on the scale £2,300 per annum rising by annual increments of £100 to £2,600 per annum. (14/5/54.)

No. 534. Remuneration of a Certain Chief Officer of the Corporation of the Borough of Llanelly. Claim: That the salary scale of the Borough Engineer and Surveyor should be £1,200-£1,400 per annum, or a more appropriate salary scale than his existing salary scale. **Award:** The salary scale of the officer concerned shall be £1,050 per annum rising by annual increments of £50 to £1,250 per annum. In the application of this award, the officer concerned shall be placed upon a point in the new scale corresponding with the point reached in the present scale. (20/5/54.)

No. 535. Rates of Wages of Workers Employed in the Sugar Refining Industry at Greenock. Claim: That the basic rates and comparable job rates should be the same at the Greenock sugar refineries as at the Liverpool refineries of *Tate and Lyle, Ltd.* **Award:** The Tribunal find that the claim as set out has not been established but award that the minimum basic rate for adult male workers shall be 3s. per hour and that the existing differentials for workers other than labourers shall be maintained. (24/5/54.)

No. 536. Zoning of the Area of the Romford Borough Council in Respect of the Wage Rates of the Council's Manual Workers. Claim: For the Borough Council's area to be transferred from Zone "A" to the London Zone of the North Metropolitan Joint Council for Local Authorities Services (Manual Workers). **Award:** Claim established. (24/5/54.)

No. 537. Wages of Maintenance Craftsmen in the Iron and Steel Industry. Claim: For an increase in the consolidated minimum rate. **Award:** Claim not established. (25/5/54.)

INDUSTRIAL COURT AWARDS

No. 2508. Public Health Service. Reference: To determine a difference between Renfrew County Council and a member of the Health Department staff for the purpose of applying the Awards of the Industrial Court Nos. 2285 and 2327 and the decisions of Committee "C" of the Medical Council of the Whitley Councils for Health Services (Great Britain) with effect from October 1, 1950. **Award:** The employee concerned is entitled while she continues to discharge her present duties, and has been so entitled from and including October 1, 1950, to be paid on a personal basis, and in accordance with the provisions of Industrial Court Award No. 2285, as interpreted by Industrial Court Award No. 2327, the salary applicable to a Senior

Medical Officer, namely, on a scale of £1,250 to £1,650 per annum. (3/5/54.)

No. 2509. Railway Shopmen. Reference: To determine the claim of the Employees' side of the Railway Shopmen's National Council that railway workshop staff at present receiving leave with pay on two of the Bank and Public Holidays per year, should receive payment for additional Bank and Public Holidays. **Award:** Railway workshop staff at present receiving leave with pay on two of the Bank and Public Holidays shall receive payment for a further four Bank and Public Holidays per year. (10/5/54.)

No. 2510. Government Industrial Establishments. Reference: A difference caused by an application from the Trade Union side of the Admiralty Industrial Council for the introduction of an assisted travel scheme for the Admiralty's Industrial Employees at the Royal Naval Armament Depot, Kilnappy. **Award:** Claim not established. (12/5/54.)

No. 2511. Government Industrial Establishments. Reference: That Admiralty male non-craft hospital grades including domestics be conditioned to a 44-hour working week. **Award:** The Court rule that employees concerned shall be conditioned to a 47-hour week. (17/5/54.)

No. 2512. The Teaching Profession. Reference: To determine a difference between the Governors of the Edinburgh College of Art and the Staff Association of the Edinburgh College of Art as to what recommendations the Governors should make to the Secretary of State for Scotland in regard to the claim by the Association for a revised salary scale for each of the Vice-Principal and of the College Secretary, respectively. **Award:** (1) The Court find that (a) the salary scale for the Vice-Principal of the Edinburgh College of Art shall, as from April 1, 1951, be £1,400 to £1,650; (b) The Vice-Principal in post shall be assimilated to the new salary scale of the "corresponding points" principle as defined in Industrial Court Award No. 2460; (c) As from August 1, 1952, the scale shall be increased by the addition of £40 at all points. (2) They further rule that (a) the salary scale for the College Secretary as from May 15, 1952, be £900 to £1,050; (b) The Secretary in post shall be assimilated to the new salary scale on the "corresponding points" principle. (21/5/54.)

GENERAL

Catering Wages Act, 1943. Tenth annual report, 1953, of the Catering Wages Commission. The Commission strongly reiterate their request for a revision of the Catering Wages Act to bring it into line with changes which have occurred since it was passed in 1943. *H.M.S.O.* 3d.

Choice of Careers (New Series No. 54.) H.M. Forces—The Royal Navy. Outlines openings and opportunities existing in the service for boys as ratings. *H.M.S.O.* 1s. 3d.

Choice of Careers (New Series No. 56.) H.M. Forces—The Royal Air Force. Gives details of openings for boys in the ranks of the R.A.F., life in the service and prospects for promotion. *H.M.S.O.* 1s. 3d.

Civil Service Arbitration Tribunal Award No. 248. Claim: That dating from January 1, 1953, the following salary scales (London, male) shall be payable to established members of Grades 3 and 4 of the Special Departmental Class of the Ministry of Labour and National Service: Grade 4, £830 to £1,045; and Grade 3, £1,055 to £1,280. **Award:** (a) with effect from January 1, 1953, the salary scales applicable to members of Grades 3 and 4 shall be amended to: Grade 4, £830 to £1,045; Grade 3, £1,055 to £1,280; (b) the normal Civil Service three-tier provincial differentiation shall apply; and (c) the "corresponding points" principle shall be applied. (12/5/54.)

Civil Service Arbitration Tribunal Award No. 249. Claim: For a revision in the scales of pay in London for full-time permanent Telegraphists, male and female. **Award:** The Tribunal award that the following salary scales shall be applied: 16 years and under, male and female, 68s.; 17, 74s. 6d. male and female; 18, 84s. 6d., male and female; 19, 91s., male and female; 20, 102s., male and female; 21, 126s. 6d., male and 124s. female; 22, 130s., male and female; 23, 134s. 6d. and 132s.; 24, 141s. and 135s. 6d.; 25, highest age point, 148s. and 142s.; thence to 180s. and 148s. 6d., respectively. (19/5/54.)

Civil Service Arbitration Tribunal Award No. 250. Claim: That the pay of Radio Operators and/or Communicators IV employed by the Ministry of Transport and Civil Aviation be increased with effect from February 1, 1954, by 18s. 6d. per week at ages 21 and over and 15s. 3d. ages below 21. **Award:** That the rate of pay of those concerned shall be increased with effect from January 1, 1953, by 7s. 6d. per week at 21 and over and by 6s. per week at ages below 21. (24/5/54.)

Civil Service Arbitration Tribunal Award No. 251. Claim: (a) that with effect from October 1, 1950, the London scale of pay for Assistant Postal Controllers, Class II (men), shall be: £440 to £955, with age-pay points from 20 to 25 years and subject to usual provincial differentiation; (b) that the salary claimed excludes Civil Service pay addition from January 1, 1952, to December 31, 1952; and (c) that as from January 1, 1953, the consolidated London scale of pay for Assistant Postal Controllers, Class II (men), shall be £510 to £1,095 with age-pay points from 20 to 25 years and subject to normal provincial differentiation. **Award:** The Tribunal rule that: (a) the appropriate London scale of pay shall be £445 to £875; (b) the above scale excludes Civil Service pay additions from January 1, 1952, to December 31, 1952; (c) the consolidated pay scale shall be £510 to £1,045; (d) normal Civil Service provincial differentiation to apply; and (e) the "corresponding points" principle to be applied in the assimilation to the new scales of officers in post. (27/5/54.)

July Diary for Management

BACIE

July

5-9 **London.** Five-day Course for Senior Training Officers on "Communications and Examination of Training Needs."

INDUSTRIAL CATERING ASSOCIATION

13 **Birmingham.** Demonstration by Mr. L. J. Verdegem.

INDUSTRIAL CO-PARTNERSHIP ASSOCIATION

9-11 **Cambridge.** Week-end Conference at Girton College on "Human Relations and the Size of Industry."

INDUSTRIAL WELFARE SOCIETY

1-5 **Oxford.** Thirty-first Annual Conference on "Industry and Society."

14 **London.** Half-day meeting on "A Survey of Safety, Health and Welfare in Industry Today."

INSTITUTE OF INDUSTRIAL SUPERVISORS

2-4 **Ashorne Hill.** Week-end Residential Course on "The Practice of Supervisory Management."

INSTITUTION OF PRODUCTION ENGINEERS

7-14 **London (Olympia).** Production Exhibition and Conference.

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY

12-16 **London.** Part II of Course in Selection Methods.

ROFFEY PARK

12-16 & 19-23. Residential Course for Junior Supervisors on "Human Relations in Industry."

URCHFONT MANOR

13-15 "The U.S.A. in the Modern World." (Course No. 302).

GREATEST DANGER IS RUSH—NOT FATIGUE

THE conscious or unconscious changes of working methods when workers start a "rush" at certain hours of the day and the readjustment period after a couple of days' rest probably contribute more towards stepping up the accident rate than the commonly blamed tiredness and fatigue. This is the novel claim based on studies at three Gothenburg shipyards, reported in a recent issue of "Industria," a Swedish industrial journal.

The investigation covered a total of 6,035 accidents among 9,500 workers during the period 1947-52. The statistics show that the accidents reach their peak shortly before lunch and attain another, although less pronounced, maximum at about 3.30 p.m. This seems to dispose of the "fatigue theory," which implies that tiredness increases successively during the day and, at longer sight, in the course of the week.

The report makes reference to an investigation undertaken in the early 1930's into productivity. It was then found that the workers' efficiency rose continuously until about 11 a.m., subsequently dropped up to lunchtime and reached another peak in the afternoon. The variation is to be explained by the fact that the worker concentrates his efforts on a rush immediately before a recess or the end of the day, a pattern of work-planning common to most people. *Thus, there is a striking connection between efficiency and accident curves.* Further, the fatigue theory is disavowed by the fact that the accident rate shows no specific increase toward the end of the day. Most accidents occur on Mondays, the lowest number being recorded on Thursdays, while a certain rise is noted for Friday and Saturday. The high frequency on Mondays is explained by the readjustment following upon the weekend, the rise towards Friday and Saturday by the "rush" before the close of the week.

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CLUB COLOUR and HERALDIC SPECIALISTS

How Unilever Instil That "New Approach"

(*Continued from page* 25)

may well not know much of the concern as a whole. Quite detailed descriptions are, therefore, given of the processes involved in the manufacture of soap and margarine, oil milling and seed crushing, as well as briefer accounts of the *United Africa Company* and of the *Unilever* food companies. During each course, members are taken on a visit to *Unilever House*, the company's headquarters, of which all have heard but not so many seen.

Between the set periods of the training programme, course members are divided into 2 groups each of which is invited to spend some time in discussing a subject of topical interest with a bearing on supervision. This is an exercise in corporate thinking as distinct from a test of members' ability to absorb and remember facts. The Head of Personnel Division introduces the "project" when he opens the course and afterwards, whenever members meet, the Group Adviser is there to encourage them to solve it for themselves. The two discussion groups each elect a "project" chairman from among their members and he, after a survey of the ground that his group is to cover, delegates a particular aspect of the problem to each member of his team. Towards the end of the course, the chairman settles with them the way in which they will present the result of their deliberations. Results are presented verbally at a concluding session with a member of the *Unilever* Board in the chair. Group chairmen act as compères for their group but each member adds his own personal quota. A general discussion follows which is rounded off by comments from the Director.

Unilever have found the "project" successful in two ways: first, as a medium through which comparative strangers can work together for a common end ; second, as a means of getting both group and individual to accept responsibility, do their own thinking and acquire self-confidence.

By May, 1954, thirty-one courses of this kind had been held and about two-thirds of the 700 *Unilever* supervisors had attended. In my own talks with course members, it soon became clear that this type of instruction was positively welcomed, not just passively accepted ; nor was it welcomed because of the extraneous perquisites attaching to the training, although these, of course, were very much appreciated. Members were enthusiastic about these three weeks, first and foremost because (*a*) their own part in management was recognised and their problems appreciated, and (*b*) they sense again this unity of management which results in an increased confidence in themselves.

One final observation. *Unilever* look upon their supervisors as an integral section of management, and management today is more than ever being exhorted to keep its outlook flexible and its mind receptive to new ideas. That this training course is designed to make supervisors "think again" is at once an indication of its topicality and its importance.

THE RIGHT ATTITUDE

"SURELY it is not the correct attitude for small firms to rely on absorbing unplaced men from larger organisations to ensure the future of their companies. Is it not better to train men in techniques which are numerous and complicated and, in many cases, peculiar to the industries they serve." (*Mr. J. Ivan Yates, president, Birmingham Chamber of Commerce.*)

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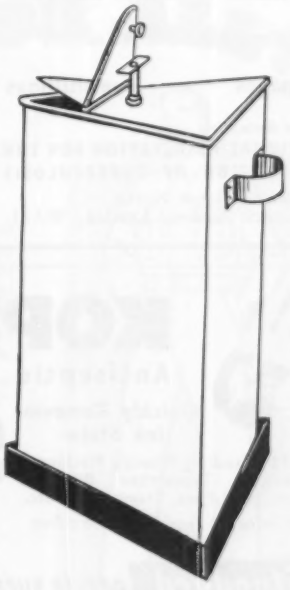

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PERSONNEL NEWS BULLETIN

(*Continued from page 32*)

Formerly engaged by a leading Nottingham hosiery firm, Mr. Wells is on the panel of arbitrators under the Industrial Courts Act, and is a member of three trade Wages Councils and of the Agricultural Wages Board.

IN BRIEF

The Central Statistical Office provisionally estimate the index number of industrial production (based on 100 points in 1948) at 130 for March, 1954. This figure shows no fluctuation from that of the preceding month; the figures for the corresponding months last year were 124 for March and 122 for February.

* * *

According to the latest figures issued by the Ministry of Labour and National Service, unemployment fell by 27,159 to 289,426 between April 12 and May 10, 1954. While part of this improvement is attributable to seasonal fluctuation, the new figure is approximately 50,000 lower than that of the equivalent period of 1953. At the end of April there were 22,337,000 persons in civil employment—an increase of 183,000 on April, 1953.

* * *

At the end of 1953, says the Annual Review of the *Esso Petroleum Co. Ltd.*, 1,228 of the Company's old employees or their dependants were receiving annuities from the Superannuation Fund or the Pension Plan. Total contributions to the Pension Plan for the year amounted to £1,400,636 of which the Company contributed £1,231,200. The Company's medical staff comprised 6 full-time medical officers together with the part-time services of 44 specially appointed doctors in the main towns.

Factory Security Guards

A NIGHT patrol service is being operated for the benefit of a number of Boreham Wood (Herts) factories by a Harrow firm, *Night Security, Ltd.* The service replaces and, in some cases, supplements the use of night watchmen by uniformed night security guards.

Security guards are armed with truncheons and equipped with police whistles to call assistance when necessary. Patrolling in pairs, the guards are controlled from a central section office, and vans and motor-cycles patrol between districts. Patrols report by telephone to the section office every hour throughout the night, whilst the section office telephones hourly all permanent guards at factories. If a patrol fails to acknowledge a call, the police are informed immediately. None of the guards is over 45. Some are ex-commandos, paratroopers or P.T. instructors.

Safety Exhibition

SAFETY allied to improved production techniques could be detected as one feature of an exhibition of welding equipment held recently at the Cutlers' Hall, Sheffield. The exhibition was organised by the Sheffield Welding Trades Technical Society and the Sheffield Branch of the Institute of Welding. Evidencing the "safety aids production" theme was a complete range of protective equipment for gas and electric welders displayed by *Safety Products Ltd.*, and the positioning equipment of *F. Bode & Son, Ltd.*, and *Donald Ross & Partners, Ltd.*

The positioning equipment enables work to be manoeuvred into a wide variety of positions while welding is carried out. The work is clamped to a steel table, the position of which is controlled by a hand wheel and foot pedal. By doing away with the need to manhandle assemblies on a bench, injury from the fall of the workpiece on to the feet of the welder is precluded. On large assemblies the use of positioning equipment can also result in a 50 per cent improvement in the time taken to complete a weld.

Trade Output Check

THE first sections of the report on the Census of Production for 1951 are now available from H.M. Stationery Office, York House, Kingsway, W.C.2. They are the Introductory Notes (price 1s. 6d.); the report on the Flax Processing Trade (1s. 6d.); the report on the Incandescent Mantles Trade (1s.); and the report on the Linoleum, Leathercloth and Allied Trades (1s. 6d.).

In all, some 157 trades are covered by the Census—separate booklets being published for each, giving details of output of the main products, employment and other particulars not available in the simpler censuses for 1949 and 1950.

Breadwinners

"MANY more women have dependants than is popularly supposed. A recent enquiry showed that 60 per cent of women of executive rank were keeping, or helping to keep, relatives. A man's efficiency depends on the capacity of the person who looks after his home, prepares his meals, and cares for his well-being. . . . It is insufficiently realised that a business woman needs her own home and ought to receive a salary sufficient to enable her to employ adequate domestic assistance." (Mrs. Ethel Heathcote, F.C.I.S., director and secretary, *Spencer, Chapman and Messel, Ltd.*, at the annual conference of the Chartered Institute of Secretaries.)

NAPT

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3 lb. potatoes washed and peeled in 60 seconds! "Merry-Go" cuts out drudgery and saves your hands. Just stand machine in sink and attach hose provided to tap; put in unwashed potatoes (carrots, parsnips too) and turn handle for only 1 minute. Nick out eyes—and vegetables are ready for cooking! "Merry-Go" peels thinly, evenly, without any of the usual waste. Made in die-cast aluminium, lovely enamel finish. Rustless, self-cleaning. Awarded Good Housekeeping Seal. Cash price £6 15s. 0d. carr. paid.
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to personnel manageresses

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Personnel Manageresses will know that the difficult days for female workers can constitute an industrial problem. Comfort is best maintained at these times with either Mene or Menex Sanitary Protection which for over fifty years has been the choice and trust of womanhood. Reliable, highly absorbent, of downy softness ... a protective back . . . Mene and Menex possess the qualities necessary for peace of mind and ease of body. They have loop ends for snug adjustment. Write today for a special quotation for a bulk order. You can have confidence in recommending . . .

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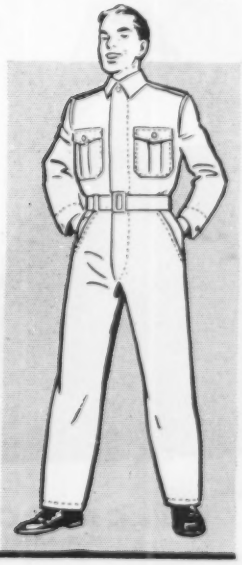

Where Electronics Help Output and the Wage Packet

(Continued from page 23)

together with the possibility of mistakes.

Six girls have been transferred from the Winding Department who formerly distributed coils to the winders from the preforming section. Two people have been transferred from the Stator Department leaving only one man on this work, and six labourers who were formerly needed to transport work and lift it in and out of the winding frames have been released for other work. It is estimated that production overheads have been reduced by 20 per cent at the new factory by this method.

The great advantage of the new system to the girls themselves is reflected in the pay packet. A steady rate of bonus earning is assured so that a stator winder of 21 years or over can earn a basic wage of 93/- plus a bonus of anything from £2 to £3 weekly depending on her own skill. The Barugh Green factory has, incidentally, opened up a new field of employment for girls in the area. Training is carried out at the firm's Huddersfield plant, where new employees are taken daily by bus, after which the girls are placed in their local factory.

It is pertinent at this point to mention the employees' gratuity scheme the entire cost of which is to be borne by the firm. Introduced to mark the Jubilee celebrations, it applies to all men and women employees who are not on the present staff pension scheme and who are aged 30 to 54 in the case of women and 30 to 59 in the case of men and who have been employed by *Brook Motors* for at least two years. Benefits will be by payment of a lump sum upon retirement based on the number of years worked. For example, a man aged 30 would draw £350 at 65 provided, of course, he remains with the firm ; a woman aged 30 would receive £300 at the age of 60. Death benefits would operate if the employee died before reaching retiring age.

Reaping The Reward

Welfare generally within the firm is well established. Training and incentive payments are good and a special committee looks after the interests of apprentices. Special certificates and cash prizes are awarded every six months to employees whose attendance record and timekeeping is good, and a suggestion scheme is operated under which payment is made for ideas which help production. A Social and Sports Committee organises leisure activities and a new sports ground has recently been completed.

Since the company was founded, *Brook Motors* have pursued a policy of ploughing back profits into the business.

"And that," said joint managing director, Mr. John L. Brook, at the opening ceremony of the Barugh Green factory, "is why we are here today with electronic control, physical labour cut to a minimum, and a really wonderful team of workers."

MODEL CANTEENS

(Continued from page 33)

source. Taking advantage of the "Free Canteen Planning Advisory Service" offered by *H. C. Shepherd & Company Ltd.*—and a similar catering service supplied by *Kenneth A. Hill & Co., Ltd.*—Mr. E. W. L. Tiddy, manager of the new laboratory, set out to achieve the latest canteen and catering amenities for his staff.

Seating 60 and catering for 150 persons only, *Lloyd's* new canteen is not a large one, but the best possible use has been made of the available space. From the *Shepherd* range of tubular steel nesting furniture, nesting chairs and tables were selected for the job. Table and chair frames are stove enamelled in blue/grey to match the canteen décor. Seats and backs are upholstered in tough blue grained leathercloth. Table tops are finished in "Klingdecor", heat-resistant plastic veneer. Results claimed are comfort, smart appearance, low maintenance costs and extreme flexibility. Since the chairs nest fifteen units high and the tables seven, floor space can be cleared in a matter of minutes for staff parties or meetings. *William Page & Co., Ltd.*, installed the kitchen and serving appliances ; and a system of day-to-day catering was set up.

By the end of the year, both *H. C. Shepherd* and *Kenneth A. Hill* expect to be able to demonstrate to their client how a superior canteen *can* cost less—both to maintain and operate. Moreover, it is felt that properly supervised diet and restful lunchtime surroundings will reflect their value in the production capabilities of the staff.

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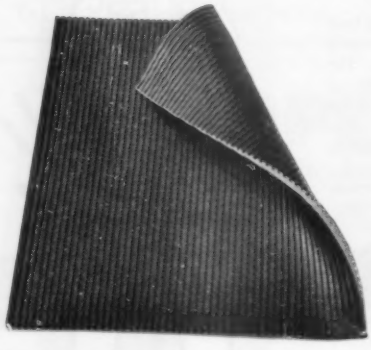
Improve VULCASCOT REGD. TRADE MARK *Production!*



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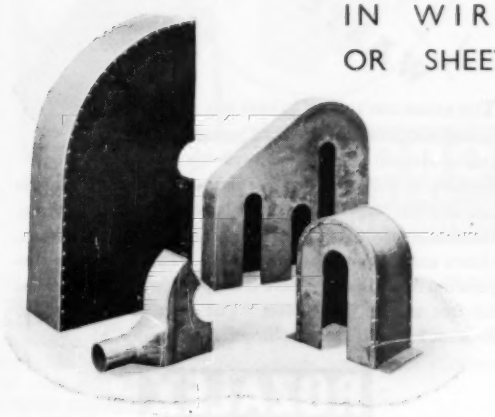

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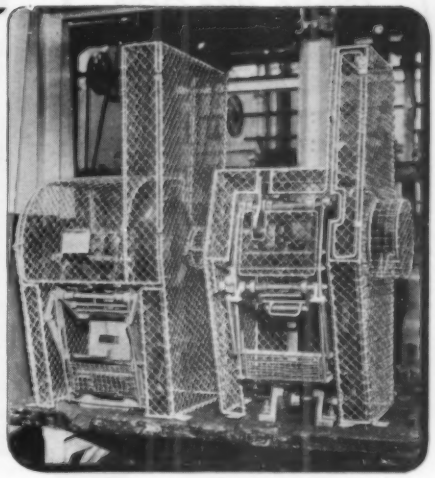

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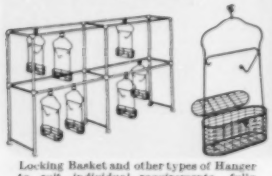

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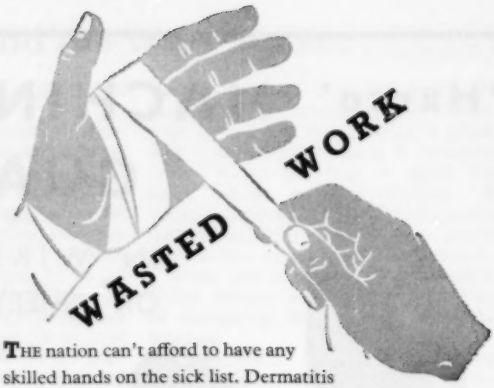

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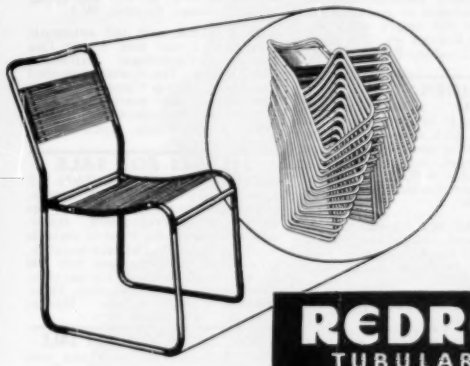

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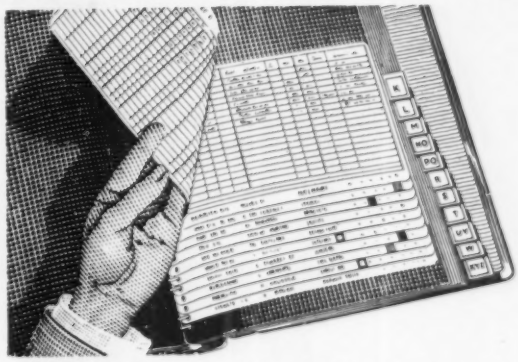

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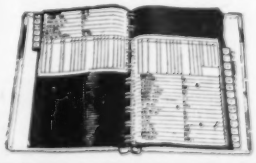

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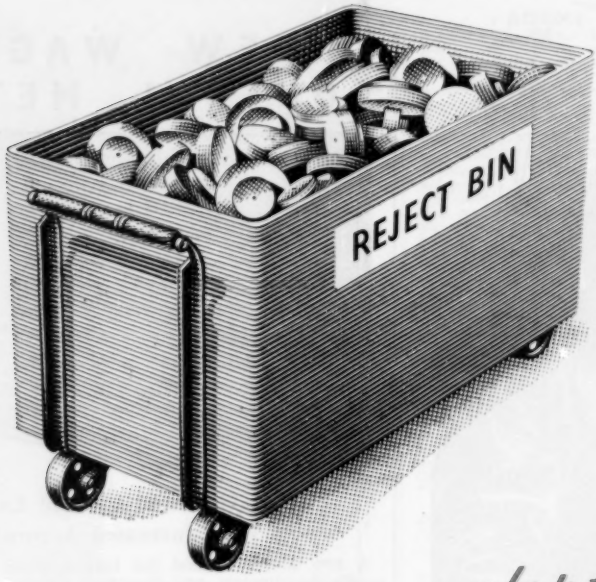

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